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SELECTIONS FROM KUANG-MING JIH-PAC

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## FOREWORD

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SELECTIONS FROM KUANG-MING JIH-PAO

(Source Span: 21 February-12 June 1961)

Number 7

- Communist China -

Foreword

This serial report is comprised of translations of selected articles from the above-mentioned daily published in Peiping. The source span indicates only the earliest and latest issues processed for any given report and should not be construed as all-inclusive dates. Selections are full translations unless otherwise indicated.

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## I. SOCIOLOGICAL

### PROMOTION OF NEW STUDENTS' QUALITY IN INSTITUTIONS OF HIGHER EDUCATION

Following is a translation of an editorial in Kuang-ming Jih-pao, Peiping, 13 May 1961, page 1.<sup>1</sup>

Before long the recruitment of new students by the institutions for higher education will begin during summer vacation this year. For several years the work of recruitment of new students, under the leadership of the Party Committees at various levels, has attained great results. Especially under the condition that there is an insufficiency of new students, it has been guaranteed that the mission of recruitment of new students must be accomplished victoriously.

Every year thousands of new students have entered various kinds of institutions for higher education for further cultivation and study. The quality of the new students has also been gradually elevated. Various institutions in various localities have accumulated ample experiences in their work of recruitment. However, in the past several years, due to the great development of education, the number of students recruited by the high-level schools has increased rapidly. Although high school graduates have increased year after year, yet the increase has so far been unable to satisfy the requirements of student recruitment of the high-level schools. The source of supply of students has been insufficient. There is not much leeway for choice. As such, there is a limit to the promotion of the new students' quality. Further, some high-level schools have not paid enough attention to the quality of new students. Consequently, a small number of schools have accepted students who are unqualified politically, academically, and physically. This has not only affected the quality of cadres cultivated by the high-level schools, but has also become a waste to the State.

The high-level schools are undertaking the responsibility of cultivating various kinds of professional talent at an advanced level. In recruitment of new students, if only students who are politically, academically, and physically qualified are accepted, then it will guarantee that the talents cultivated for the State will meet the specifications. In this respect, there has been a more favorable condition than that of past years.

This year there have been more high school graduates than in past years. Thus, the high-level schools have more room in selection of students. The so-called quality of new students includes politics, academic achievements, and health. We must take hold of these three principles

rightly without the slightest deviation. Among them the first is political quality. Only if an individual has a high political awareness will he have a clear-cut object of study, assume a right attitude, and positively make an effort to study so that he may faithfully serve the cause of socialism after graduation.

The standard of academic achievement is also an important aspect in the quality of new students. Without a higher level of academic achievement, it is hard to accomplish the formidable mission of study, and hard to accept and take hold of the latest knowledge of science and culture.

Good health is also a prerequisite in guaranteeing the accomplishment of the mission of study. Study is a kind of hard labor. Without good health and strong vigor, it is hard to fulfill the task. The talents cultivated by our high-level schools must be Red and expert. We advocate that Red and expert should be consolidated and politics and professional business should also be consolidated. This is the road of "red and expert" which we are advocating. However, we do not approve of being only Red but not expert, as this is not the road of Red and expert. For this reason, the high-level schools must adhere to this principle in their recruitment of new students.

First, they must pay attention to the political qualifications of the students, and at the same time they should also pay attention to academic qualifications. In the past, the high-level schools laid emphasis only upon academic achievements in their recruitment of new students, and, consequently, accepted students who were totally unqualified politically. This has constituted waste for the State. In recent years, the political quality of the new students has been emphasized, thus correcting the inclination of the past. As a result, the political quality of the new students has been noticeably elevated. In the future, we must persist in so doing and take a further step in emphasizing the guarantee of the new students' political quality. Also, on the other hand, it is necessary to take precautions against over-emphasizing the political quality of the new students and neglecting academic qualifications. Only in this way can we promote the quality of the new students.

The quality of the new students has an immediate effect upon the quality of education in the high-level schools which cultivate the talents that are Red and expert. The administrative departments of education and various high-level schools should assume a solemn and responsible attitude towards the examination of new students, and make a conscientious investigation concerning their qualifications. Then selection will be made in accordance with prescribed standards in order to insure the quality of the new students.

In addition, we must resolutely prevent the inclination to stress only quantity but not quality, or academic achievements but not political qualifications. The high schools, which are the sources of supply of new students to the high-level schools, must assist the administrative departments of education in various localities in doing a good job of recruitment of new students. On the one hand, they should positively help

the students with their academic work, and on the other hand, strengthen the indoctrination of the graduate students. This will enable the graduate students to deal with the problem of further education correctly. Moreover, they should also strengthen their investigation of the students and positively make recommendations to the high-level schools so that the latter may use them as references in selecting new students. Only through the cooperation of various sides can we do a good job of student recruitment as well as of promoting the quality of the new students.

This year the high school graduates are greater in number. This is a most pleasing phenomenon. The greater number of high school graduates has not only better satisfied the recruiting requirements of the high-level schools in promotion of the new students' quality, but also can establish an economic frontline. A reinforcement of laborers who have a high standard of socialistic awareness and culture will be greatly favorable to the development of economic construction in our country, particularly on the agricultural front line. It will be of importance if such an arrangement will be thoroughly made according to the policy that agriculture is the foundation in solidifying and developing the people's communes in the rural areas of our country.

This year's high school graduates must be prepared for two purposes -- preparation for higher education and preparation for taking part in productive labor. Further education is aiming at rendering better service to the country in the future. Students who will graduate this June should make double efforts to study in order to attain distinctions so that they may enter the high-level schools for further study. However, not all students who will graduate can enter the high-level schools. This is understood by all. Students who cannot continue their education should be happy to join the first line of agriculture. To get into higher education and to take part in productive labor are both required by our Fatherland. The graduating students should correctly deal with the problem of further study and work in compliance with the requirements of our Fatherland. They should let off their light and heat in their respective positions.

This year, although the high-level schools have some favorable conditions in their recruitment of new students, the mission still is formidable. It is hoped that various localities and various high-level schools, under the unified leadership of the Party Committees, will demonstrate their positivity and creativity, summarize their past working experiences, overcome difficulties, and make an effort to promote the quality of the new students in total accomplishment of the recruitment mission.

## GRADUATION AT HUAN-NAN UNIVERSITY AND NANKING AGRICULTURE COLLEGE

[Following are translations of two dispatches from Wu-hu and Nanking in Kuang-ming Jih-pao, Peiping, 17 May 1961, page 2.]

Dispatch from Wu-hu. As part of the review program at Huan-nan University, the work of the 47 graduates currently working in six high schools in the city of Wu-hu was reviewed. The information provided by this review served as the basis for devising new measures of raising the quality of graduate students.

The main purposes of this review were to examine the work records of the graduates, to gather ideas about training workers from the units to which these graduates were assigned, to learn from the graduates' experiences in practical work, and their ideas about the instruction of their alma mater. A total picture was obtained by broad investigation.

The results of this review indicate that the vast majority of the graduates were well trained in accordance with the objectives and well qualified for their jobs. They occupy comparatively more important positions in high schools. In addition to teaching, many of them have assumed the responsibility of class monitors, party cadres, and study group leaders. The results of the review further show that over 80% of the graduates have good attitudes toward teaching, enthusiasm, responsibility, and patience. They provide good guidance to their students, carefully correct their work, are willing to learn from senior instructors, and constantly improve their instruction. They have been praised by the schools in which they are working, and some of them have been rated advanced workers.

This review has also led to the discovery of many problems in their work, such as deficiencies in some basic theories, unfamiliarity with some of the basic laboratory techniques, lack of understanding of high school conditions before graduation, lack of experience in teaching methods, etc. The Party Committee, administration, and all departments of the Huan-nan University further examined and analyzed the levels of the students' political and technical knowledge and have decided to adopt measures on the basis of existing problems to raise political and academic standards of the students, particularly the students about to graduate.

First of all, all departments should put emphasis on ideological education, especially ideological education related to their particular fields, to make students love their specialized pursuits, develop superior hard-working habits, happily accept assignments from the organization, and

devote themselves to people's education without reservation.

Second, the instruction of courses in basic theories should be strengthened, particularly those closely related to high school curriculum. The quality of instruction of these courses can be quickly raised by using experienced instructors. Additional knowledge of subjects like mathematics, physics, and biology, besides increasing the number of hours of instruction of certain basic courses in the lower division, should be imparted to the graduating students on the basis of the requirements of current high school curriculum. The review found that the seniors in the Mathematics Department were weak in the area of functions of real variables and functions of complex variables. This led to further instruction on these subjects for a certain period of time during the semester. The Biology Department felt that the graduating students lacked knowledge about genetics and biological techniques and increased lectures and laboratory work. The Chemistry Department assigned experienced instructors to work in the laboratories to assist students in acquiring laboratory techniques, and the time of students' basic exercises was increased.

Third, students should be familiar with high school conditions and instructional methods. All departments should give lectures on high school instructional materials and methods so that the graduate students will be able to teach immediately on their joining the schools. Some departments sent their graduate students to the affiliated high schools to do practice teaching in related subjects.

Dispatch from Nanking. The Nanking Agricultural College seeks to raise the quality of graduating students through study, generalization of experiences, and adoption of new measures.

At the beginning of this semester, the Party Committee of the Nanking Agricultural College classified the increase of quality of graduating students as one of the priority projects. In accordance with the directives of the Party Committee, the college administration and all departments examined the students' ideological conditions, study, and production activities. As a result of this study, it was felt that hard work, industrious learning, scientific study, physical work in farms, apprenticeship in factories, resulted in higher levels of political awareness, practical skill, and ability to work independently. But there were a number of classes and individual students who were below standard in certain courses and whose basic technical training was insufficient.

To correct this situation, the school first stressed ideological education to stimulate students' political ambition and learning enthusiasm so that they would graduate with high honors and be well prepared to serve in the field of agriculture. Ideological education has broadly raised the understanding of the graduate students. The graduating veterinary students after studying articles like "Comrade Wang Jo-fei in Jail," "How to be a Revolutionist during the Period of Construction," and "Be a Superior Graduate," in Chung-kuo Ching-nien, expressed to the Party that they would utilize the time left before graduation to raise their political awareness, to master technical skills, and that they would steadfastly obey the country's assignments.

During the current semester, the school's Party Committee and all departmental branches led the departments and instructors in initiating a number of special lectures and courses on new agricultural techniques. Extra assistance was furnished to the lagging students. In order to get firsthand information about the production conditions in Kiangsu, the school invited leading comrades of the Provincial Agriculture Department, the Provincial Planning Committee, the Nanking Branch of the Chinese Academy of Agricultural Sciences to make special reports to the graduate students. Some departments increased the practical training of the graduates. The Veterinary Department had very little in the way of clinical diagnosis in the past, but this semester it offered training like micro-organism examination and pathological anatomy, and sent students to live-stock corrals and veterinary hospitals to gain clinical experiences for four weeks.

In scheduling work for the graduate students, the Nanking Agricultural College considered the workload and time of rest both for instructors and students and regulated the number of class hours and further requested the instructors not to assign too much work in order to reduce the workload outside classes. Right now the 600 graduate students of the school's seven departments are diligently working for better grades.

## IMPROVEMENT IN TEACHING CHINESE TO NATIONAL MINORITIES

[Following is the translation of an article by Kao Lin  
(高琳), Secretary of the Chinese Communist Party  
Committee of the Sinkiang Teachers College and Vice-Presi-  
dent of the Sinkiang Teachers College, in Kuang-ming Jih-pao,  
Peiping, 19 May 1961, page 2.]

In the past two years, teaching the Chinese language to the national minorities at the Sinkiang Teachers College under the leadership of the Party Committees in the autonomous regions, with the support of sister schools, and through the efforts of the entire body of faculty and students, has been very successful.

In the past, students could only acquire 1,500 words after a year's study. Now the students' vocabulary reaches 4,500 words. Before students could not read technical books even after four or five years of study of Chinese. Now students can acquire basic reading ability in one year. Many of them after one year's study can follow Chinese-speaking instructors' lectures on technical subjects. In the fall of last year there were more than 20 national minority students who graduated from Chinese language classes and became Chinese translators and teachers. This summer there will be over 90 students who will leave school with even greater honors to take up jobs. One hundred and fifty national minority students in the preparatory classes have been enrolled in regular classes after only one year's study and are now able to attend classes taught in Chinese. After studying Chinese for one year, many minority instructors can now carry on conversations in Chinese and read Chinese reference books. Some of them have been selected to be sent to schools of higher learning for advanced study. The advancement in Chinese instruction has not only raised the quality and quantity of instruction, but has also strengthened the unity between the national minority instructors and students, and Chinese instructors and students, creating favorable conditions for promoting educational policies of the Party on a school-wide basis and improving instruction, and also for training superior national minority teachers.

In organizing and guiding Chinese language instructions for the past two years, we have gained much knowledge and experience. Mainly there are the following points.

1. The political leadership of the Party should be strengthened to insure that Chinese language instruction advances in the correct direction. In the fall of 1959, members of the Party Committee proposed that

one year's training in Chinese should enable the national minority students to attend classes taught in Chinese. It was enthusiastically supported by the majority of instructors. Nevertheless, there were a small number of instructors who lacked confidence and expressed skepticism as to the practicality of such a proposal. To combat such tendencies, the school's Party Committee and departmental branches carried out a series of political programs among instructors, such as discussions of various forms to explain the situation and assignments. As a result, the instructors were generally greatly encouraged. In the meantime, meetings to facilitate the exchange of teaching experiences between sister schools were held and experiences were generalized. It was on such a foundation that the well-planned Chinese language program was expanded. With this as its focal point of attention the school examined its work and solved a series of problems arising from attitudes toward instruction. These include the problem of relationships between Chinese language teaching and ideology, the coordination between instruction and production work, reforming Chinese language teaching methods, etc.

Despite the fact that there are strong demands and aspirations to learn Chinese among the national minority students, it should not be assumed that their ideas, knowledge, and attitudes towards learning are completely correct. Especially when they encounter difficulties in learning and other adverse external factors, they are liable to be emotionally upset. The Party organization always understands the national minority students' feeling about learning Chinese and quickly solves many problems. In the meantime, it devotes itself to far-sighted, well-planned, and penetrating ideological work on the basis of the characteristics of the various stages of the students' learning.

2. Instructional contents should have a practical basis. Despite the variety of Chinese language classes offered in our school, their objectives should be the same; that is, to acquire a basic knowledge of the Chinese language and to conduct ideological education through language instruction. Starting from the reality of the demands of present education and from the reality of students' levels of Chinese, we have selected and edited language instructional materials that have prescribed ideological contents for our instruction. This has greatly influenced the students' wisdom, will, and sentiment. For example, more selections of Chairman Mao's writings have increased the students' interest. "This is Chairman Mao's writing," they say, "we must learn it well."

The objectives of instruction are to develop fully the students' abilities in listening, speaking, reading, and writing. Linguistically, phonology, vocabulary, and syntax are three inseparable factors. Phonology is the physical outer shell of language, the testimony of its existence. Vocabulary is the building material of language. The richer the vocabulary, the richer the language. Syntax is the rule of construction of the language. Syntax is the key to understanding language. Hence, phonology, vocabulary, and syntax form the basic contents of Chinese language instruction. On this we must base the "four abilities" training. Our instructional program and selection of instructional materials are in accordance

with the above-stated conditions.

Chinese language instruction, besides sharing the principles with language teaching in general, has its special characteristics. Therefore, in addition to constantly learning from the foreign language teaching experiences in other schools and Chinese language teaching experiences in other national minority areas (including grade school language teaching experiences among Chinese), more emphasis is placed on searching out the special principles governing national minority students' learning Chinese in Sinkiang. It is very necessary to divide the instruction program into many phases according to the characteristics of Chinese language instruction. For instance, we divided the general Chinese course into a basic Chinese phase and a technical Chinese phase with one transitional phase in between. The basic Chinese phase is further divided into phonology, conversation, syntax, and combination phases. Throughout the course, listening, speaking, reading, and writing abilities are all developed with activities centered around speaking. In each of the small phases there are important features to be emphasized. In this way difficulties can be handled separately and instructional materials can be better prepared.

3. Instructional methods should be constantly improved, experiences generalized, and efforts exerted to raise the quality and quantity of instruction. In these areas we have gained the following experiences in the past few years.

(1) Every method and measure must serve a definite demand and purpose. (2) The native language and target language should be smoothly and appropriately used in explanation, translation, and comparison. Students' receptivity for the target language and their habits of using it should be developed. (3) Classroom lectures and practices outside the classrooms should be closely coordinated. (4) Modern training aids and direct observation methods should be employed to facilitate the students' comprehension and to create deeper impressions. (5) Guidance for students' self-study should be strengthened to reinforce classroom instruction. (6) The educational principle of theory united with practice should be steadfastly observed, and various forms of extra-curricular conversational activities should be developed.

These methods have greatly helped instructors in their guidance work and developed students' positivity and creativity. The methods that bring out students' positivity and creativity and satisfy the demands of people have been proved to be the best methods and have produced good results. Consequently, to be concerned about students, to understand students, to be willing to learn, and to generalize experiences quickly on the part of instructors, are the keys to improving instructional methods.

In the past few years the correct leadership of the Party and the support of sister schools has enabled our school to score a number of successes. But the new conditions created by the development of the socialist construction work in the autonomous regions still leaves us way behind. Especially the new conditions in the cultural revolution. There are still many problems in our program that need to be solved, and many difficulties

that must be overcome. For instance, the quality of instructors still cannot meet the demands of instruction. The quality and quantity of instruction are not high enough. The scientific study of the Chinese language hasn't yet reached a satisfactory level. Chinese language instruction in our school is a long-term project. Our job ahead is pretty heavy and important.

Towards these ends, we must do the following things. (1) We must further carry out the policies of the Party, improve instruction, and raise the quality and quantity of instruction to enable Chinese language instruction to catch up with the new situation and to make contributions to the cultural-educational work in the autonomous regions. (2) We must adopt effective measures such as on-the-job training, taking leave from work to come to the school for training, training in China Proper, and advancement in practical work. We must try to raise the standards of our present instructors and see to it that their knowledge of the Marxist-Leninist theory reaches a certain standard and they are equally fluent in Chinese and national minority languages. (3) We must intensify the scientific study of the Chinese language. Scientific research activities must be closely coordinated with educational practices to further enhance the quality and quantity of Chinese language instruction.

GRADUATION PROJECTS AT THE SHANSI HYDRAULIC ENGINEERING COLLEGE

Following is the translation of a dispatch from Taiyuan, Shansi, in Kuang-ming Jih-pao, Peiping, 20 May 1961, page 1.

The graduating students of the Shansi Hydraulic Engineering College gear their graduation projects to production missions to support agriculture.

Under the leadership of the Shansi Water Conservancy Department and the Taiyuan Municipal Water and Soil Conservancy Bureau, technical personnel in Ching-le Hsien and Ning-wu Hsien and instructors and 49 graduating students of the secondary technical division of the Shansi Hydraulic Engineering College have formed a work team to plan the conservation of water and soil in the upper stream area of the Fen River. The work was begun on 12 May. In the next 80 days the work team will make a survey of water and soil losses and work on counter measures in an area of 5,000 square kilometers.

Meanwhile, 119 graduate students of the Hydraulic Department of the college technical division and the Agricultural Hydraulics Department of the secondary technical division have gone to Yang-kao Hsien in the northern part of Shansi to work on their graduation projects directly connected with production missions. These projects include reservoir irrigation plans, designs of reservoir aqueduct systems and their construction, designs for typical areas, the design of a power plant and pump station in the lower stream, the complete design of flood channels for main aqueducts crossing constructions.

RAISING THE QUALITY OF GRADUATING STUDENTS OF THE HYDROLOGY  
DEPARTMENT OF THE EAST CHINA HYDRAULIC ENGINEERING COLLEGE

Following is the translation of a dispatch from Nanking in  
Kuang-ming Jih-pao, Peiping, 20 May 1961, page 1.

On the basis of the instructors' generalization of experiences in planning graduation projects since the educational revolution, the Hydrology Department of the East China Hydraulic Engineering College has adopted effective measures to raise the quality of graduate students. Right now there are 150 graduate students specializing in land hydrology who are all engaged in graduate projects.

Since the educational revolution of 1958, the Hydrology Department has been stressing the coordination between the graduate projects and production planning. The separation of theory and practice of the past has been corrected, and the students' ability to think and plan independently has been enhanced. But there are still a few areas that require improvement.

Since the beginning of this semester, the Hydrology Department set aside three weeks and assigned more than 20 instructors who had conducted graduate projects to sum up past experiences, to evaluate accomplishments, to find shortcomings and problems, and to propose corrective measures. These measures will be carried out in planning this year's graduate projects.

The topics as finally selected for this year's graduate projects are basically in accord with what the students have studied. Except for "the Study of the Frequency Computing Method" which is theoretical investigation, the rest are closely allied to production planning. Some of them deal with scientific study of certain important hydraulic engineering constructions in the country. But even more deal with problems that have risen from various hydraulic engineering construction work throughout the country. The solution of these problems not only satisfied the demands of education, but also benefits agricultural production by furnishing data for better utilization of existing engineering work and for establishing new projects. Additional topics have been added to make up for the narrowness of the individual topics. During the course of these projects the students' ability to study and work independently is emphasized so that they can have the full benefit of doing the projects and write projects reports or theses upon the completion of their projects. Furthermore, they are required to answer and debate questions individually. Group activities are also stressed to facilitate the exchange of information on their progress and their newly-gained knowledge.

According to the regulation of the educational plan, all projects were started on 12 May 1961. Twenty experienced instructors of the department were selected to guide these projects. Each project is under the supervision of a better instructor. In addition to these instructors, those who work in the field have engineering technicians to help them or work with them. This is very helpful to their projects. In order to facilitate supervision and the progress of work, the project working areas this time are more concentrated. During the course of the projects, the instructors are with the students and give them assistance whenever necessary. A group of experienced instructors were recently detailed to assist students who had been absent due to sickness or other reasons.

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## CORRESPONDENCE EDUCATION EXPANDED AT THE HUNAN TEACHERS COLLEGE

Following is the translation of a news dispatch from Chang-sha in Kuang-ming Jih-pao, Peiping, 21 May 1961, page 1.7

While endeavoring to improve its regular day-time education, the Hunan Teachers College is expanding its correspondence instruction and getting better results by reforming teaching methods on a practical basis.

The past few years saw great expansion of the correspondence instruction program at the Hunan Teachers College. Up to last semester, students increased to over 70,000. Subjects were increased to seven, including languages, mathematics, physics, chemistry, history, geography, and biology. The number of correspondence instructors was increased to 15, and some regular full-time instructors also took part in correspondence instruction. From March of last year to January of this year, groups of instructors went to high school classrooms on three occasions to provide guidance and to improve teaching through investigation and study.

Guided by the principle of "solve practical problems and improve gradually and systematically," the school abandoned the method of dividing courses of special subjects and major subjects into phases and adopted the new method of concentrating on one subject at a time. That is, each department offers more than one course each semester and allows students to make selections. When requirements of courses and tests have been met, a certificate of completion for the subject will be issued. Thus, the students do not have to take several courses at the same time, which would slow them down during periods of heavy workloads. This change makes students feel greatly encouraged. The design of courses is also tailored to individual abilities.

For new teachers, those who were promoted from grade schools, and those who, despite their experience of many years, still have difficulties, courses on instructional materials and methods are given to help them master the instructional materials and familiarize them with the methods. For those who are basically capable of teaching in high schools but who are weak in certain areas on the subject matter, their common difficulties are analyzed and courses on basic theoretical knowledge are given. For those who are above average and have no difficulties, courses are offered to help them systematically improve themselves. The school has developed 19 kinds of course materials incorporating suggestions from students and other sources. Seven supplementary periodicals for teachers' references

are published and widely acclaimed.

To provide more direct guidance and to help students solve practical problems concretely and quickly, beginning in October of last year, the school continuously sent instructors and cadres to concerned high schools in various areas within the province to give guidance. Each tour lasts three months. Under the concrete leadership of the Party Committees and education administrations in various places, the guidance teams in cooperation with correspondence schools determined the contents and methods of guidance according to different requirements of different types of students.

Taking language teaching as an example, many students were deficient in analyzing ideas and literary construction of some literary works in the light of the characteristics of the different types of literary works. The guidance team called the students concerned together to have a discussion. They individually presented the difficult problems which had been encountered. After a thorough study, the guidance team came up with analyses and solutions in the form of special reports. As for teaching methods, the guidance teams selected experienced high school teachers and helped them to make public demonstrations. After critique sessions, their methods were popularized for emulation. The guidance teams prepared lessons together with students and held conferences with individuals or small groups in order to make their guidance work more effective.

In the past few years, through correspondence instruction, the Hunan Teachers College has enhanced the cultural and professional standards of high school teachers and has helped them in bringing about an increase of quality and quantity in high school education. Among Chinese and mathematics teachers, many in classes 56 and 57 were formerly grade school teachers, and after four to five years of correspondence study are now capable of handling high school subjects. Many of them have been elected leaders of study groups, the backbone of the high school teaching staff.

## PREPARATIONS FOR GRADUATE WORK AT TIENSIN UNIVERSITY

[Following is the translation of a dispatch in Kuang-ming  
Jih-pao, Peiping, 22 May 1961, page 1.]

This year there will be more than 1,800 who will graduate from Tientsin University to take jobs in industry.

Graduate work is the final link of college education. Tientsin University also uses it to improve the quality of instruction and to give the students broad training in systematizing the knowledge that they have gained in the past few years. The school further requires that the graduate work, while representing the terminus of the instruction of major courses, shall incorporate practical problems in production and develop the students' ability to work independently. Graduate work mainly consists of projects, thesis writing, and scientific research. In selecting topics all departments have paid equal attention to the objectives of specialized training, to key problems in production, and to the study of important basic theories.

The inorganic group of the Chemical Engineering Department selected the study of low-pressure synthetic ammonia catalysts as its topic, which is not only valuable to agriculture in the economic sense, but is also a theoretical study. Other topics like prolonging the life of converters and radio insulation ceramics study are also in line with the professional development of students and geared to the solution of practical production problems.

In arranging graduate work for the students, all departments made careful arrangements on the basis of educational requirements. After the topics were selected according to their educational values, concrete contents were also arranged. Despite the fact that the switch assembly construction work on the Chi-yun-ho Dam had been completed, the Hydraulics Department still put its design as part of the graduate work in order to provide thorough training for the students. Many departments determined their topics and assignments on section or individual basis. For instance, those students who had done research work before were assigned projects this time. Those who had worked on projects in the past were assigned research work.

Tientsin University clearly expressed what it expected from graduate work. Upon the completion of the work, students must write their conclusions or theses and answer and debate questions. Their work will be evaluated. The students of the welding group of the Machine Manufacturing Department were required to complete structural analysis, technical analysis,

welding equipment design, products inspection, cost accounting, etc. for the design of welding parts of the Iron Ox 40 model tractors, tire tools, and clamp tools. This gives the students the opportunity to systematize their knowledge of welding technology.

Students engaged in scientific research in the Chemical Engineering Department were required to work diligently, to use reference materials carefully, to determine scientific methods and procedures, to observe and record each phenomenon, to take all figures into account, and finally to write reports. Graduating students of some departments made reviews of the quality of their learning in the past few years. Extra instruction was given to those students who have not completed the required courses on account of change of majors or have not taken certain courses because of a lack of experience in scheduling.

Experienced instructors in many departments have been especially assigned to take over the instruction of the graduating classes. Professor Tu Chen-fu (杜鍾福), Chairman of the Hydraulics Department, and Professor Shu Yang-ch'i (舒揚慈), Assistant Chairman of the department, are personally in charge of the graduate work. Instructors are very conscientious in guiding students. Many of them went to the factories with the students to study production problems and to find solutions. This has been very helpful to the students.

Thanks to the deep concern of the school and instructors, the graduate students are working harder than ever. Many of them are studying foreign languages. Many of them are reviewing basic course materials. Many of them are working on basic experiments in the laboratories. Since the graduate work has been determined, the fifth year students of the Precision Instruments Department have formulated plans for small groups and individuals and checked their progress weekly. Many students of the graduate classes have expressed that they would not disappoint the country and the people and that they would utilize the time left before graduation to study even harder.

## STRENGTHEN PRACTICE TEACHING ACTIVITY OF THE GRADUATING CLASSES

[Following is the translation of a news item in Kuang-ming Jih-pao, Peiping, 27 May 1961, page 2.]

The Party Committee of the Shansi Provincial Agricultural Normal College is strengthening practice teaching activities of the graduating classes and raising independent teaching capabilities of the graduates.

At present, the potential graduates of this college have completed the planned teaching curricula. They are utilizing the period of time prior to graduation to strengthen practice teaching activities.

Through curriculum planning and trial teaching the potential graduates are being familiarized with the grasping of various links of teaching, and nurturing their ability to work independently.

This college has always emphasized political ideological education of its graduating classes. Since the second half of last year they have strengthened the teaching of the educational format and education based on agriculture. It is helping these graduates to establish their ideas in offering their lifelong services to agricultural village teaching.

Now all 190 graduates are hurriedly indicating to the Party that they will grasp their capabilities properly, and insist on obeying the Fatherland's assignments in going to the farming villages and mountain districts,

## AGGRESSIVE ORGANIZATION OF RETURNEE STUDENTS IN AFTER-WORK TRAINING PARTICIPATION

[Following is the translation of an article by Wang Hsueh-hou (王學厚), Secretary of the Hsien Party Committee at Yun-ch'eng, Shansi, in Kuang-ming Jih-pao, Peiping, 28 May 1961, page 2.]

Accompanying the leap forward of industrial and agricultural production of this hsien, there has been great development in educational affairs. In 1958 we have basically popularized primary school education. There were already 18 middle schools and over 11,900 in attendance. There was also development of agricultural and other professional middle schools.

Because of this development in education, the schools have been able to supply a large number of personnel for agricultural and industrial production. In recent years, aside from supplying large numbers of construction personnel to the industrial front, the schools have also supplied over 9,100 middle and primary school graduates for the agricultural front lines.

In the midst of these new conditions, when the entire Party and the entire nation are carrying on foodstuff production, the hsien this year will send over 8,000 primary school graduates back to the farm villages. From now on, accompanying promotion and penetration of cultural revolution, the number of returnee students will increase from year to year. The ranks of the village intellectual youth power will become stronger as time goes by.

The participation of these primary and middle school graduates in village farm production is a good thing. It is the natural result of educational affairs development, and is also something that is required by the situation; something that is the hope and requirement of the people of the entire hsien.

Insuring the incessant uplifting of these thousands upon thousands of returnee youths, their healthy growth, and their effectiveness on the agricultural production front are the important tasks of the Party organs at the various levels.

In the past few years, aside from organizing the Party Committees in the over-all management of their labor and livelihood foundations, from the hsien to the brigades, we have established activity direction groups for the training of students who have returned to the villages. Production brigades were supplied with part-time and full-time teachers so that

they might be trained during after-work hours, and receive continued education and knowledge elevation.

At the present time there are regularly over 5,000 participating in these after-hour classes. They are distributed among agricultural middle schools, after-hour middle schools, technical night schools, short course training classes for training. Some of them asked old farmers to act as their teachers and commenced all types of scientific research activities. Accompanying the raising of their political awareness of their cultural and scientific techniques, the effects of this training upon agricultural production and various types of work are gradually becoming greater and greater.

In the past few years, through active participation we have deeply realized that since the communization of the farm villages, the tendency in village farming production has been a gradual enrichment of the contents of technical farming reform. The technical and cultural knowledge required for this has also become stricter. This requires that the vast farming masses, particularly intellectual youths, have a higher political ideological awareness as well as an even higher level of cultural and scientific technical knowledge in order to meet the needs of various kinds of reconstruction.

That is why, in continuing our anti-illiteracy activities and developing after-hour education, we have struck out in grasping returnee middle and primary school students' after-work education. In the past, these students absorbed a certain amount of basic knowledge from their books. But this knowledge, when used in present day production, requires a period of difficulty-enduring purification. Therefore, it is necessary on the one hand to ask them to take active part in labor production in order to learn production techniques. On the other hand, they have to be organized in participating in after-hour training so that theory can be combined with practice. This is a most important matter.

In practice, this is actually the case. Junior middle school graduate, Li Ying-chieh (李應杰), who has returned to Wang-ts'un, through after-work training, utilization of the cultural and scientific knowledge that he learned, has been attacking agricultural studies. Not only has he brought in many kinds of wheat and cotton stock seeds, but he also bred many types of superior stock seeds for the uplifting of local production.

Active practice experience tells us that organizing them in after-hour training encourages their political ideological awareness and helps them to establish solidly the spirit of enthusiastic love for the agricultural village and agriculture. It is an important measure that will strengthen scientific and cultural ranks of the villages.

Although these middle and primary school students who are products of the new social order have been the objects of the Party's upbringing and education, they have never participated in class struggles and have never been through baptism by labor. Added to this is the fact that there is still residual capitalistic ideology left in society and the home. A certain number of them have been infected with capitalistic class ideology. For instance, some look down upon village life. Others do not like to

participate in manual labor, and have divided labor into higher and lower classes.

Therefore, it is necessary for the village Party organs to grasp the after-work education of these people tightly and allow them to participate in various village political movements purposefully. Towards individual thought, when there are important errors, they should educate, persuade, and explain patiently. Their political ideology level should be raised.

The Yu-hsiang Commune Party Committee used after-work schools and other types of education to make returnee graduates feel that farming is glorious, and that they should make agriculture their calling.

The Chieh-chou Commune was able to handle the ideology of the returnee intellectual youths properly so they were strong in revolutionary passions; and were able to be practical and hard-working in all kinds of labor as well as in aggressively digging into their studies. As a result, 86 of them were selected as provincial, special district, and hsien model workers. Thirty-two of them gloriously joined the Communist Party, and 110 joined the Youth League. They have very happily named their after-work school the "Communist College."

Experience also tells us that the organization of returnee students in after-hour training participation is directly related to the problems of the continuation of their healthy growth. The youths are the new masters of society. Reconstruction of socialistic and communistic society depends on them.

Chairman Liao says, "The world is yours, and also ours; but eventually it will be yours alone. You young people's spirits are growing and bursting; you are in your prime and are like the morning sun around eight or nine in the morning. Our hopes are centered upon you." Therefore, when the returnee graduates go back to the villages, the most important task of the Party organizations is to allow them to grow up healthily and continuously.

Because we were able to emphasize universally their cultivation and education in the last few years, arrange their labors appropriately, and pay attention to their healthy growth, the Party organs have succeeded in making 50% of these students participate in Party activities and serve as brigade level leaders and as various kinds of technical workers. Gradually these students have become the backbone and power of farming villages political movements and production reconstruction activities.

In order to push actively the organization of after-work training for this year's return-to-the-country graduates, our hsien's political organs are using the summarization of previous experiences as a basis for setting up plans for this year's training so that preparations may be made to welcome the return of the new persons. This will allow them, as soon as they come to this big family, to be able to work and study happily, and continue to receive further strengthening and elevation.

## HOECOMING INTELLECTUAL YOUTHS STUDY HARD

Following is the translation of a news item by the Cultural Education Department of the Party Committee at Yun-ch'eng, in Kuang-ming Jih-pao, Peiping, 28 May 1961, page 2.

The Party Committees at the various levels in Yun-ch'eng, Shansi, are concerned with the after-hour education of homecoming middle school and primary school graduates. They are stressing the elevation of their political awareness and their cultural knowledge. A great portion of these people are now serving as cadres for production brigades and as various kinds of technical personnel.

These Party organs have been annually organizing these return-to-the-country production activities. The middle and primary school graduates have been allowed to join political activities of many kinds in order to elevate their class consciousness. Aside from this, the production brigades have universally organized them into participating in after-work training so that their cultural and scientific knowledge levels and their technical production ability may be elevated.

At the present time there are over 5,000 of these youthful intellectuals who have returned to the country and joined after-work training of various kinds. The Chieh-chou Commune Party Committee regularly organizes these youths and progressive elements in the communes in seminar participation. It invited red army veterans and model worker Ch'u Yueh-li (屈光耀), etc., to give reports. It also organized them in moral and commune cleanups and trained them through actual struggles. As a result, these youths are all stable in ideology and positive in their labor.

The Yu-hsiang Commune Party Committee last year adopted the following four measures for 560 primary school students who have returned to the village.

(1) Centered around the completion of education, under the guidance of the Party, the Youth League members undertook the establishment of after-hour middle school classes with the help of primary school teachers; (2) Allotment of training time based on agricultural leisure seasons, or overloads; (3) Equal reward for the students' work in the villages, and (4) Arrangement of work to suit the individual. The various production brigades organized eight after-hour middle school classes and were able to allow homecoming intellectual youths to participate in this after-work training.

The shape that these after-work training classes took depended upon

the locality. It was flexible and varied. There were approximately the following forms: (1) participation in the five-seven style of farming middle schools for training. In the whole hsien there were 20 of these schools which were able to absorb 2,450 of these returnees; (2) fixed schedule concentrated school lectures, and returning home to do some studying. For instance in the Wu-ts'un School District, the returnee students from its five villages gathered every Sunday afternoon at the Complete Primary School for two hours of training. On ordinary days each village would form itself into a small group for self-education and mutual education; (3) lecturing and reviewing on alternate days. These were held under the auspices of the after-hour educational authorities, with the assistance of primary school teachers; (4) studying culture in youth after-hour schools and studying politics and techniques from the red specialty schools; (5) gathering in the evenings at the local complete primary schools for training, and participating in labor production in the daytime; and (6) meeting the requirements of production by establishing professional short training courses. For instance, the Hsi-chang-keng Red Specialty School once started cooking, accounting, cotton planting, kindergarten training, poultry raising, health, machine repair, and latinization of Chinese courses.

The returnees' curricula, based on present needs and the principles of systematic elevation, now generally includes language, mathematics, politics, and basic agricultural knowledge and production techniques. In agricultural middle schools, they have also added physics, chemistry, biology, and mechanics courses.

As for teaching materials, in language and mathematics they have selected agricultural texts. Technical courses have texts which are written by the teachers themselves. Political teaching material contents concern themselves with explanations of Party policies and current events.

Regarding teachers, they have utilized local personnel based on requirements of the courses in order to solve this problem. Full-time teachers were usually available for cultural courses. Some of them were part-time teachers from regular middle and primary schools. Teachers handling political courses are usually Party secretaries or cadres who have returned to the country.

Technical courses are handled by technical chiefs of the production brigades and model workers. Personnel and cadres from tractor stations, technical promotion stations, etc., would also be invited to give part-time instruction for these courses. Because these teachers have a rich wealth of experience in active participation and plenty of technical knowledge in production, and, in addition, they emphasize the principles of connecting the theoretical with the practical, the results of their teaching were very good. A common reaction of the students was "easy to understand and useful."

No matter whether it is political, technical, or cultural knowledge, the returnee students have all improved through after-work training. The effects of this improvement have been felt in all aspects of work and activity.

At the Chieh-chou Commune, out of 712 returnee students, 86 have been selected as model workers by the province, hsien, and special district authorities. Expert tractor hand, Li Sheng-ken (李生根), pig-raising expert Pei Yu-lien (裴玉蓮), stove improvement expert, Hsiao T'ai-ho (萧太和), new cotton seed breeders, Ch'en Wen-wa (陈文华) and Li Yin-chuan (李引川), and Chang Shu-hsien (张淑贤), etc. were enthusiastically praised by the masses.

Among the returnee students at this commune, 32 have gloriously joined the Communist Party and 110 have joined the Youth League. Besides, there were many who were able to master progressive agricultural teaching. For instance, among 72 returnee students in the Fu-shang Production Brigade of the Chin-ching Commune, there were 14 who were able to operate the diesel engine and bulldozer; five are not tractor operators.

DISCUSSIONS ON ARCHITECTURAL PROBLEMS HELD  
BY ARCHITECTS AND ARTISTS IN PEIPING

Following is a translation of an article in Kuang-ming Jih-pao, Peiping, 14 May 1961, page 1.7

In the afternoon of 12 May, inside Ch'ing-hsiao-lou of Pei-hai Park, Park, some architects and artists in the Capital were gathered together for the second time to discuss architectural problems.

In the meeting, besides problems such as tradition, reformation, content, form, and architectural concept, which have been brought up for discussion, some new problems have also been discussed.

On problems of tradition and reformation, Chen Yu (陳毅), design engineer of the Railway Engineering College, held that any form of art, once developed to a certain stage, needs reformation; if we only inherit and do not reform, it is impossible. He further held that the ten architectural accomplishments which were finished on the eve of the tenth anniversary of the People's Republic are not purely national form, but also include a lot of common things of international nature. He said, "In future architecture, there will be more and more of these common things of international nature."

Lu Kuei-yuan (盧立元), artist, brought up a new problem; that is, how to apply the consolidated means of revolutionary pragmatism and revolutionary romanticism in future architecture. He held that since it has been traditional in our country to have the combined means of revolutionary pragmatism and revolutionary romanticism, it is incumbent upon us to inherit and develop them in order to enable the architecture of China today to better reflect the spiritual outlook of our social system and the laboring people. He further proposed, "Only when architecture, drawing, sculpture, and skilled arts are consolidated will it be possible to apply the combined means of revolutionary pragmatism and revolutionary romanticism to attain results. Of course, any artistic characters at any time do not come from nothing. There must be heritage as well as development. The most important aspect is to emphasize the national spirit of China." Lu Kuei-yuan considered that the consolidated means of revolutionary pragmatism and revolutionary romanticism should first be applied to the general specifications of the cities, and under the premise of unified political direction, characters, form, and captioned materials should be multilateral. He also held that the architectural specifications of Peiping should have their own mode and character.

On the topic of architectural concept, opinions are also divergent.

Chen Yu considered that architecture is an applied art because it is under the restriction of practicality, economy, and material. Hua Tien-yu (滑田友), artist, was of the opinion that architecture is a comprehensive art; therefore, architects and artists should cooperate closely with one another. Lu Kuei-yuan held that skilled arts and architecture are just like the flowers whose stems are united and therefore inseparable; both architects and artists have effected much cooperation in the ten great works completed on the eve of the tenth anniversary of the People's Republic, and in the future should take a further step in cooperation and mutual assistance in order to better serve the cause of socialism.

On the question of what are the decisive factors of architectural character, enthusiastic discussion was held in the meeting. Chen Yu was of the opinion that content and form were the demonstration of character; however, the two were not equal. It is necessary for one to be primary and the other secondary. He further pointed out, "Content should be primary and form secondary as content is purpose." He did not agree with other people who considered that physical features of land, geological property, climate, etc., had much influence on the architectural character. He held that such natural conditions have changed very little from ancient time to the present. Owing to the development of science and technology, it is possible for man to overcome such influential factors of nature and therefore their influence will become less and less while the influence of society will become more and more. Chen Yu also held that architectural content and form have a class factor and therefore it may be said that they are to be decided by one's consciousness and attitude.

Hu Lao (胡老), artist, also held that form should be secondary to content as purpose should come first, especially for residential buildings. He said that when he was in foreign countries he saw some residences which did not look too attractive externally, but inside the house the purposes were served. Therefore, he considered that so long as architecture was suitable for a useful purpose, we could not say that such architecture was structuralism. For example, the Peiping Workers' Gymnasium exposes its structure externally and is also full of fine tones.

Lin Yueh-i (林岳義), architect of the Peiping Institute of Design for Industrial Architecture, did not agree with the foregoing views. He asked, "If architectural character is to be determined by content, then what determines the content?" He held that since the days of class society, architecture had always been for the purpose of serving the class. Today the main condition for determining architectural content is economic foundation which reflects the requirements of the people. He further held that form and content should be dialectically unified. For some architecture of memorial nature which demands higher standard in art, its form is a part of its purpose.

In this symposium, Sun En-hua (孫恩華), engineer of Peiping Municipal Institute of Architectural Design, made an analysis of architectural art of the new architecture since the liberation of Peiping. This aroused great interest among those attending. Someone was of the

opinion that if this subject approached reality, it would enable the discussion to go into further detail. Sun En-hua divided the architecture which has emerged in the last 12 years in the Capital into several periods. The first stage is anti-structuralism and anti-formalism. Judging from the handling of architectural arts, the thought of design was confusing at that time. Architects had their individual pet ideas about the same thing. Each resorted to plagiarism from famed architects whom he adored and applied them in his architectural designs.

The second stage is national form and socialist content which is comparatively much better. However, what was the national form? At that time, opinions greatly varied. A great many people considered that a huge roof signified national form and hence architecture was inundated by a revival of antiquity.

The third stage is anti-revival of antiquity and anti-waste. After the atmosphere of extravagance and waste had been corrected, architecture with stability and simplicity has emerged. However, some people have considered that content was purpose and did not give the least consideration to architectural art. This caused a situation in which anti-revival of antiquity became anti-huge roof and anti-formalism meant disregarding form.

The fourth stage is the period in which the ten great works were completed on the eve of the tenth anniversary of the People's Republic. Up to this moment, many buildings were designed with huge roofs and in national form, and each had its own features of distinction. Furthermore, to suit the local demands, Western styles have been adopted. For example, the Peiping Workers' Gymnasium exposes its structure externally. This is good-looking, too. This has also proved that a huge roof is not absolutely inapplicable and such application is not necessarily a revival of antiquity. When such application is justified, it ought to be used. When structure is externally exposed, it is not necessarily structuralism. This has opened up a new road for all Chinese, foreign, ancient, modern, etc., designs to be used without discrimination. He further pointed out, "An architect may have his own favorites. But in dealing with the embodying task, he must obey political demands and should not carry out the task in accordance with his own fancy."

Sun En-hua, Lin Yueh-i, Wu Lao, and Hua Tien-yu have spoken of the problems of unified specifications in their discussions. Sun En-hua held that in the great garden of architecture, a colorful situation should present itself. Variation in character should be permissible. In making preparations for design, architects should first take into consideration the position of the architecture in question in relation to the total architecture of that area. Hua Tien-yu proposed the question of whether it is possible to work out an outline for construction so that everyone will have something to adhere to in the specifications for cities. He further held that it is possible to improve the existing buildings which are unsatisfactory. For example, a three-story building in Tung-chang-an Street originally looked ugly. When two stories were added to it, it looked much better.

Besides, Wu Lao was of the opinion that since the Liberation some public buildings have tended to have a delicate and elegant character. Few, if any, have the character of magnificence. Lu Kuei-yuan also brought up the fact that symbols of a political nature such as the Red flag, Red stars, sickles and hammers, etc., must be used prudently and solemnly. Any abuse of these symbols will make them become commonplace.

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## II. SCIENTIFIC

### ANHWEI HYDRAULIC ENGINEERING AND POWER INSTITUTE CARRIED OUT CERTAIN RESEARCH PROJECTS ON FARM HYDRAULIC ENGINEERING THROUGH ASSOCIATING WITH TEACHING AND PENETRATING INTO REALITY

[Following is the translation of an article by The Correspondence Team, Communist Party Committee, Anhwei Hydraulic Engineering and Power Institute, in Kuang-ming Jih-pao, Peiping, 21 February 1961, page 1.]

The Anhwei Hydraulic Engineering and Power Institute has been carrying out the teaching job, and simultaneously has been earnestly developing scientific research activities and has already completed certain research projects on farm hydraulics successively, which have had effects in promoting agricultural production. Among those performed, there were several which were significant, such as the experimental research on river network irrigation on the Huai-pei River, investigation and research on the construction and operation of small hydraulic power stations in rural areas in southern Anhwei, experimental research on reducing the rate of imperfect grains of paddy rice, and research on annual modulus of flow in the Ta-pieh Mountain Region.

To make the research work meet realities and be promoted on time, following a resolution by the Party Committee, the Farm Hydraulic Engineering Department of the Institute has established a river network experimental base at the Fei-huai People's Commune in the suburbs of the city of Peng-pu. There they are carrying on experimental research in irrigation for such main crops as paddy rice, wheat, soy beans, etc. In addition, they are doing research on arrangement of field engineering in the river network area, as well as assisting the commune materially in carrying out the planning, designing, and constructing of field irrigation and drainage ditches, of a road system, and of the checkered portions of land. Due to the appropriate scientific arrangement in various construction work as well as careful management, a bumper harvest was achieved last year, with output per mou raised from 300 chin to around 400 chin. At the same time, by visiting and other methods, they carried out investigation and research work on cultivation techniques, irrigation, and drainage rules, and pre-soaking and kiln-drying of such crops as rice and wheat; they summed up the experiences and had them promoted on time.

They have also trained more than ten rural technicians in the fields of irrigation experimentation, field engineering construction, and hydro-

logical and meteorological observation for the commune. Over 20 members of the faculty and students of the Hydro-electric Power Department carried out investigation and research on more than 20 rural hydro-electric power stations in three months. They went to Yueh-hsi, She-hsien, and other places in Anhwei Province, and compiled an "Investigation Report on the Construction and Operation of Small Rural Hydro-Electric Stations," summarizing experiences of rural hydro-electric power construction in parts of Anhwei Province, finding out certain problems concerning construction and operation of these power stations, and suggesting some measures for improvement.

The results of scientific research work in supporting agriculture have also made the teaching substance of certain related courses richer than before. During the past, such materials concerning field construction arrangement, kiln-drying, and others were very scarce, while now, through practical experiments and research, plenty of valuable material has been accumulated which is being supplemented in teaching texts.

"LET 100 FLOWERS BLOOM" IN THE RESEARCH OF STRUCTURAL GEOLOGY IN CHINA

[Following is a translation of an article by Yen Shih  
(任士) in Kuang-ming Jih-pao, Peiping, 11 May  
1961, page 2.]

Structural geology (including the structure of the earth) is a special field in the science of geology. The contents of its study cover the structure of the earth's crust, its historical development, and its laws of movement. On the basis of geological structure, we may study the relationship between the production of minerals and the geological structure so as to expound the law of mineral location in time and space. As a result, we can use such a law to predict and find the mineral resources. Likewise, it can also be used to solve problems in engineering and hydrogeology in rendering services to the socialist construction of our country.

Before the Liberation, only individual scholars and experts conducted research on structural geology in our country. Comrade Li Ssu-kuang (李四光), Vice-President and concurrently Department Chief of the Department of Geology of the Academia Sinica, began his work on problems of geological structure early in 1923, and made analyses on the cause of geological statics, which he has created as the main theory for understanding geological structure. Comrade Huang Chi-ching (黄汲清), Deputy Director of the Institute of Geology of the Geological Department published his works in 1945 on important units of geological structure, using methods of historical analysis. However, owing to the reactionary rule of the Kuomintang, academic research work could not gain any development. For more than ten years since the establishment of the People's Republic, in the wake of the socialist construction of our country in agriculture, industry, science, and culture, especially since the great leap forward of 1958, research work on the earth's structure has been popularized in the whole country and consequently a new outlook that is thriving with humbling phenomenon has presented itself.

In 1960, when a mapping convention was called by the Geological Department, it was noted that many maps on geological structure were on exhibition. These maps, whether qualitatively or quantitatively, were unprecedented. This has reflected that the research work of structural geology in our country has produced the prosperous phenomenon of "letting 100 flowers bloom."

At present, under the leadership of the Party, the exploration groups

which are exploring geological structure and mineralogical laws have grown stronger and stronger. In geological reports and results of research, as well as in geology textbooks, all relevant geological problems have been fully expounded and explored. On the basis of extensive popularization and research, sufficient development has been attained by the academic school of geology both in theory and research of structural geology. More geological research workers have published a great many of their works on this subject. This has created a favorable condition for geological investigation and search for mineral resources.

For several years, the Party's policy of "letting 100 flowers bloom and letting 100 schools contend" has promoted the academic research work in structural geology. Judging from the condition which the recent publications and practical work have reflected, various academic schools and scholars who have different understanding and knowledge are positively working hard in order to seek the objective truths and in order to serve the cause of socialist construction. According to incomplete information, the research and understanding of the geological community in this country concerning structural geology are mainly in the following respects.

1. Comrade Li Ssu-kuang, Vice-President and concurrently Department Chief of the Geological Department of the Academia Sinica, has been using methods of geological statics for over 30 years to study all problems of geological structure in China. This kind of method may be divided into two aspects. In fundamental theory, it is first necessary to make observation and inspection in the field and then make analysis and deduction on various kinds of materials of geological structure. Furthermore, sometimes prototype experiment is necessary for comparison. This will help determine the form of the materials of geological structure in various categories and what law should be applied. At the same time, it is also necessary to make observation and experiment on the strength of materials in the field in order to determine the reaction of various kinds of rocks, such as the elasticity, plasticity, combination of elasticity and plasticity, etc. In short, the elasticity and the non-elasticity of rock are to be tested. According to the results of research using the methods of geological statics, a separate theoretical school has been developed and established by the Institute of Geological Statics of the Department of Geology under the personal leadership of Comrade Li Ssu-kuang. Many maps have been made.

2. Scholars who are studying geological structure from the historical point of view have published many works. For example, in March 1959 a book entitled The Important Outlines of the Earth's Structure in China was published by the Research Laboratory of Structural Geology of the Geological Institute of the Academia Sinica, in which there is a passage, "The main peculiarities of the earth's structure in China are that the bedrock region is more active than other bedrock regions, but the trough region is less active than other trough regions; there are many basic cracks. Furthermore, there is a controlling effect on the structure of the lithosphere and the activity of the molten materials. The development of the earth, through the various stages, has the phenomenon of heat expansion, yet it always tends to cool off. The development of the earth's crust and

the bedrock regions at various periods may have turned from stability into activity, yet it will tend to become stable gradually at the end. The existence of stable regions and unstable regions on the earth's crust, in our opinion, is determined by the extent to which the primitive cracks took place. We further hold that the development of the earth's crust in China may be divided into two stages. Before the Proterozoic era, the crust was composed mainly of troughs which may be temporarily called the stage of extensive troughs. In this period, the non-elastic metamorphism was strong. After the Proterozoic era, the crust was composed mainly of bedrock, which may temporarily be called the stage of extensive bedrock. In this period, crack metamorphism was strong."

Chang Wen-yu (張文佑), Deputy-Director of the Geological Institute of the Academia Sinica, has published an article entitled "The Study of Mao Tse-tung Ideology to Open Up a New Road for Geological Science," in the Scientific General Report, which says, "The essential energy which dominates the development of the earth is the nuclear energy which constitutes the earth's material, radiation energy, and the energy of gravity. The energy produced by the rotation and revolution of the earth and the energy which the sun radiates are only secondary in importance."

Professor Chen Kuo-ta (陳國塔) of Chung-nan College of Mineralogy published a book in February 1960 on The Theory of Bedrock Activitation and Its Significance to Mineral Location which says in part, "Bedrock activitation is of the 'stable' region nature. Formerly it was held that this represented the final form of the development of the earth's crust and therefore would become a drastically active bedrock region; when this was formed up to a certain period, it would gain higher activity which was apparently beyond the scope of the movement of the bedrock-type structure and which would turn into a phenomenon of an active region. This is a new type of structural movement which represents the development process of the earth's crust in which the trough regions turned into the bedrock regions and then turned farther into higher activity. Regardless of whether in past or future geological periods, the earth's crust always sticks to the helix-like direction. Owing to the contradictions and conflicts between the stable and active regions, mutation and alternation take place. From one mutation or alternation to the next and from simple to complex or low to high, endless development goes forward. Such a law of general nature may be called 'the law of the earth's crust movement, mutation, and alternation.'"

Comrade Huang Chi-ching (黃汲清), Deputy-Director of the Institute of Geology of the Geological Department, published his book on Important Units of Geological Structure in China, which says in part, "The cyclic mountain formation movement is the peculiarity of the earth's structure in China. In the mountain formation movement of a ridge, if only one cycle has been recorded, it is called mono-cyclic. When successive cycles have occurred more than twice, it becomes multi-cyclic. Strictly speaking, all mountain ridges are multi-cyclic. For there is no mountain ridge in the world which became solid in only one cyclic mountain formation movement and which would not be interfered with by subsequent ones."

However, in reality, if we know that the structural constitution of a certain mountain ridge has undergone no remarkable change after one or two cyclic movements, we shall consider it to be mono-cyclic. Otherwise, we shall regard it as multi-cyclic."

In 1956 Comrade Huang Chi-ching proposed the concept of "neo-bedrock." In February 1960 the Academic Post of Geology published an article entitled "The Elementary Summary of the Fundamental Peculiarities of the Chinese Geological Structure," which says, "For several years, research on the geological structure of China has convinced us that the entire Chinese bedrock should be a "neo-bedrock." The important distinction between bedrock and neo-bedrock is that the latter is more active than the former. Such activity has not only manifested itself in the final stage of the neo-bedrock development, but has also appeared in the early stage. It has not only shown in the final stage of mountain formation movement, but especially in a series of enormous vibrating movements from the early to the final stages. Speaking of its geological age, there are neo-bedrocks which are ancient -- that is, before the Archeozoic era. Some are younger -- that is, in the Paleozoic era or Mesozoic era."

Besides, it has been understood that Comrade Yu Te-yuan (喻德淵), Vice-President of Ch'ang-ch'un College of Geology; Professor Ma Hsing-yuan (馬杏垣); of the Peiping College of Geology; Comrade Chang Pai-sheng (張伯生), Vice-President of Northwest University; Comrade Li-Cheng-san (李承三), Professor of Chengtu College of Geology; and other comrades of many geological institutions have been conducting research work on the geological structure of China and have offered many new opinions and explanations on different problems.

Comrade Ch'eng Yu-chi (程裕淇), Vice-President of the Scientific Research Institute of Geology of the Geological Department, in the latest discussion on the policy of "letting 100 flowers bloom and letting 100 schools contend," has said about the research of structural geology of our country: (1) Two academic schools exist in the research of the structural geology of China. One school applies the viewpoint of statics to analyze the geological structure. The other one is traditional, using the development viewpoint of geological history for research. Each has its exclusive good points. Basically they are mutually beneficial to each other. The combination of the two will constitute a new direction in the modern research on structural geology. However, consolidation should be made through debate and practice for solution.

(2) The use of the development viewpoint of geological history in the research of the earth's structure should be confined to geological data from five to seven billion years ago, as there is only a little understanding about the geological data before the Archeozoic era. Owing to the insufficient knowledge concerning the mono-elements before the Archeozoic era, the concept that the "lithosphere was formed in the Proterozoic era" is not entirely compatible with realistic conditions. However, at present, some of our comrades have changed this viewpoint.

(3) The study of structural geology itself is to determine the synthesis of such a task. In the past, research workers were mobilized

to conduct research on ancient living organisms underground, ancient geography, activity of molten materials, effect of metamorphosis and mineral beds, etc. The results of such research are insufficient.

(4) There are some problems in terminology.

In the research work of structural geology, the Chinese scientific community of geology has covered a wide range of topics including the fundamental cause of the development of geological structure; in what form the geological structure movement has manifested itself in time and space; the main conflicts of the geological structure movement; whether transmutation is possible in the main conflicts; if so, under what conditions, and in what form. In methods of research of geological structure, the question is whether the main methods are based upon the viewpoint of statics or on the development viewpoint of geological history. How should these two kinds of viewpoints be consolidated? What are the main points and explanations between the two different academic schools that require mutual study? In order to suit the convenience of research, it is necessary to define the meaning of certain technical terms which should be uniform in usage. All such problems have attained gradual solution through free discussion, which will push the research work on the structural geology of China forward with further development.

SELF-CONSCIOUS APPLICATION OF DIALECTIC MATERIALISM  
IN THE DEVELOPMENT OF GEOLOGICAL SCIENCE

[Following is a translation of an article by Ch'eng Yu-chi  
(程裕淇) in Kuang-ming Jih-pao, Peiping, 11 May 1961,  
page 2.]

Geology is a science within the scope of natural science. Its object of study is the earth. At the present stage, its object of study is mainly concerning the material constitution of the earth's crust, its structure, and historical development. The main purpose of such a study is to exploit nature (for example, mineral resources), reconstruct nature (for example, reconstruction of the drought areas,) and to offer the necessary scientific dogmas and scientific grounds.

For more than ten years since the People's Republic was born, geological science and technology have attained great achievements following the socialist construction of our country, particularly the high speed development of the productive work in geology. It has produced a promotional effect as well as a guiding function in the socialist construction and productive work of geology of our country. However, owing to the fact that the earth is a complex object of study, its birth and development are affected and dominated by a series of effects in the geological changes. Such changes and the various geological phenomena manifested in them actually represent a series of physical and chemical changes or even biological changes in the immense space and for a long time. (Biological changes only occurred on the supersphere of the earth and only appeared when the development of the earth's crust had gone into a definite stage.)

In the process of development of the geological science, it is inevitable that many problems of different natures have arisen. The rise of these problems is first due to the complex nature of the object of study. Men have adopted different methods, and started from different approaches in different aspects in their study of different problems. Second, the development of productive work in geology is not in equilibrium in different areas. Similarly, mankind's requirements of minerals vary in different periods of time. This is one of the deciding factors in establishing the nature of non-equilibrium in the development of geological science. Furthermore, the levels of knowledge, thought, and methods of the scientific and technological workers are also different.

Among certain problems of a different nature, the existence of some important problems which in their own nature may produce other prob-

lems. For example, (1) the earth's crust is a unified body. Now the various geological phenomena shown by the earth's crust, in actuality, have undergone a series of physical and chemical changes or even biological changes for a long time and in an immense space. For this reason, we must start from objective existence in the unified study of the object. We must also synthetically apply the fundamental theories of physics, chemistry, and biology, the new theories of these fundamental sciences, and their new methods, as well as the scientific experimental methods to our study of the geological phenomena. Then we may be able to obtain the basic theoretical explanation from the various constitutions, structures, and historical changes of the earth's crust. Furthermore, it is necessary to reach an understanding not only qualitatively but also quantitatively. In this way, we shall be able to arrive at an understanding which is more in line with law and order, from analysis and synthesis of various embodying phenomena in accordance with fundamental theory and mathematical grounds. However, judging from the whole, the entire geological community has done more work in understanding, observing, and depicting certain geological phenomena produced in the historical changes. But application of the results of research in other fundamental and theoretical sciences in the study of geology has been insufficient. More work has been done qualitatively, while quantitative work has not been done sufficiently. The use of traditional means and methods to carry out the research has been more than the use of new methods, especially the application of the results of research in other fundamental and theoretical sciences. Few new technological methods and experimental methods have been used.

(2) The various geological phenomena which have been affected and restricted by a series of geological changes are a synthesis of multi-nature. Among various geological phenomena exists a relationship of mutual restriction and interchange. In order to understand the true nature of geological phenomena, it is necessary to start from the viewpoint of integral concept and development and to apply synthetically various sciences and various methods within the scope of geology in the analysis and study of geological phenomena. On the other hand, we cannot start with the demand of each science and carry out our study within the province of a certain technical science alone. As such, we shall attain an understanding which is comparatively more complete so as to overcome various various forms of unilateral understanding. However, in our past academic work of geology, due to the time-honored practice of classification of work, which tended to carry out research and study from a certain angle in a certain aspect on a certain object of study respectively, overall and embodying analysis and solutions which employ synthetic methods in multi-aspects from various angles have not been sufficiently done in attacking the problems of geological phenomena from the development point of view.

(3) Inasmuch as various geological phenomena are a series of physical, chemical, and biological changes which have taken place in an immense space for a long time, we must, therefore, pay attention to the

factors of time and areas in our work of research and establish the concept of time and space, from which we may gradually understand geological phenomena in different historical stages and in various geological areas as well as in the whole history of development of geology and the laws of changes in the entire province of geology. However, because of the restriction on materials offered by the work of research and productive geology, the development of our academic research has become unbalanced. For example, judging from the aspect of geological areas, some areas offer a lot of work, others only a little. Judging from the aspect of geological era, more study and research has been done in the recent geological eras and rare, if any work, has been done before the Archeozoic era. (According to data available, the age of the earth is at least over 45 billion years. The pre-Archeozoic era is about five or six billion years old. The interval of this era is about 30 or 40 billion years.)

Judging from the development of geological history and the entirety of geological phenomena, geological phenomena in certain localities at certain historical stages have been more thoroughly understood and given attention. But little attention has been paid to the endless changes in the entire process of geological phenomena and the relationship of mutual inheritance, mutual restriction, mutual connection, and interchange among various geological phenomena. So it is impossible to deny that, in the results of the research we have already attained, there exists many unilateral, local, static, and incomplete data. It might even go so far as to exaggerate such a knowledge inadequately for use in explaining other aspects.

(4) In the research work of natural science, if we want to keep away from the methods and theories of subjectivity and metaphysics, we must self-consciously apply dialectic materialism to the embodying scientific research work, from which we seek the objective truth and develop science. Geology is no exception. However, in our past research work, although we were inclined toward materialism in our self-enlightenment and to a certain extent dialectics, it is not permissible to bury its positive contribution to the geological science. Nevertheless, self-conscious application of dialectic materialism to correctly and creatively solve some of the important problems in geology has not been sufficiently carried out. Such a problem is not only the fundamental problem in the academic work of geological research, but is also necessary to go through free debate in order to strengthen the guiding function of Marxism in geological science.

From the above, we know that there are still a great many problems which await solution. Each problem has its own cause for existence. The reasons we have given above are only the main and common ones. We should aim at the fundamental situation and problems of a common nature to adopt corresponding measures through the policy of "letting 100 flowers bloom and 100 schools of thought contend" and gradually take to the road of thorough settlement.

DESERT RECLAMATION BRIGADE OF ACADEMIA SINICA  
CONTINUES ITS HARD WORK IN TAKLA MAKAN

Following is a translation of an article in Kuang-ming  
Jih-pao, Peiping, 12 May 1961, page 1.]

The Takla Makan Desert Reclamation, Exploitation, and Research Brigade of the Academia Sinica has worked hard for more than ten days in the desert, and has victoriously completed the general investigation mission of 260 li from the Yu-lung-k'o-shih River leader to the desert. It has reached an understanding of the natural conditions such as the river bed, the climate, etc., in these areas. Now the research team on wind and sand of this brigade intends to take a further step in clarifying the law of formation of the sand ridges and the movement of sand mounds in the Takla Makan Desert which may jeopardize the reclaimed farmland. Now the team has moved to the Pei-shan area, southwest of the desert, and will be camping on the sand mounds for more than one month so that it may conduct scientific observation on the movement of sand mounds. The research team on water and soil has investigated the section in which Yu-lung-k'o-shih River joins in the same course with K'o-la-k'o-shih River and has selected it as a site which has the peculiarities of the desert for exploitation. The team together with the masses is studying the embodying measures for prevention of sand and salt.

The source of the Yu-lung-k'o-shih River starts from K'un-lun-shan and runs through the green pasture of Ho-tien into Takla Makan. On both river banks, sand ridges run like a chain in wave-like form. In the river valley beaches, which are broad and wide, there are pools with crystal-clear water, thriving grass and bushes, as well as forests of willow trees. There is hardly a human soul around. Only deer, wolves, and boars appear in packs every now and then. Under the stimulation of the Party's policy of crash programs for agriculture and food production, the people of Ho-tien exploited 200,000 mou of cultivable land in the wilderness. Half of this land has been planted with barley, corn, cotton, and oil-bearing materials. Now the land has become a green pasture with fields, roads, and drainage systems, which constitute a beautiful view. Since the exploited area is located deep in the desert, there are menaces such as wind, sand, drought, and salt. Consequently, solidifying the new green pasture and insuring a good harvest and production have been formidable tasks. This has been the main purpose of the brigade's scientific inspection work.

In order to consolidate the findings of the general investigation with the precious experiences for prevention of sand and salt handed down

by the ancestors of the peasants of the Uighur Nationality, the brigade has held talks with the local commune members and the old peasants whenever and wherever the brigade went so that they might consolidate the peasants' experiences and popularize the advanced methods of sand and salt prevention. This has given the commune members of the exploited areas great encouragement and hence are welcomed by them. Many commune members automatically came to offer their assistance when they heard that the research brigade arrived.

Their work in the depth of the desert has made it necessary to put up a stubborn struggle against the unfavorable circumstances and natural conditions at every moment. On 29 April, a sand storm arose in the desert which lasted for a long time. The wind roared like thunder and the sand flew up and down. Meanwhile, the brigade leader, Chu Chen-ta (朱震大) and the members of the wind and sand topographical team were united in maintaining their work until nightfall.

## THE PROSPECTS FOR ASTRONOMY AFTER MAN GOES INTO SPACE

Following is a translation of an article by Wang Shou-kuan  
(王守寬), in Kuang-ming Jih-pao, Peiping, 13 May 1961,  
page 2.

Gagarin returned from a space trip giving mankind a signal: "Let's go into space." This has become an important activity of mankind in the 20th century.

For many years, astronomers have attempted to place their telescopes in a more reasonable location. They do not mind taking the trouble of travelling all the year round, and they bring with them a series of exorbitant demands to select the site of the observatory. To them, this is simply a struggle against the earth's atmosphere. They established observatories on the peaks of mountains which are away from civilization in order to get away from the obstacle of the atmosphere.

For thousands of years, mankind has observed the phenomena of the heavens through a shroud of the earth's atmosphere. It is just like seeing flowers in a fog. The result of the observation is more or less that "flowers do not look like flowers and the fog does not look like fog." There was a famous example concerning the contention of the so-called canals in Mars supported by a map of the systems of canals that were crossing one another. Such a fact presently attracted great attention. For this reason, some other people began to observe Mars. They took a great deal of photographs and drew many maps. However, due to the inconsistency of all the maps, and after a long controversy, it was considered that in fact no one had ever taken a good look at the details of Mars.

Such a problem is partly due to the earth's atmosphere and the atmosphere of Mars. However, the main point is due to the inability to penetrate into the minute details, which costs the loss of the right to speak in science. The problem of Mars is so, and so are many problems of astronomy.

The sun, the moon, and the stars can show their existence only by their own illumination or reflection from other's light, which has revealed to us the news of our immense universe. Here, the so-called "light" in its broad sense should include all electro-magnetic radiation. Besides the visible light, there are radioactivity, ultraviolet rays, infra-red rays, etc. Heavenly bodies that are the sources of radiation, apart from illuminating, also radiate other types of electro-magnetic waves.

Before reaching the earth, the celestial radiations have to go through the atmosphere of the earth, but the atmosphere does not allow all

radiation to go through freely. In fact, the atmosphere is like a very strict customs entrance, which detains the major part of all celestial radiation and only lets through two small parts -- one is the visible light from red to blue and the other is the radio wave which has a wave length from several millimeters to 20 or 30 meters.

The astronomical workers have given a nickname to these two penetrable wave lengths which are called the "windows of the atmosphere." Men who live on earth can only observe the universe through these two windows.

This has constituted a situation of observing the sky from the bottom of a well. To the astronomers, it is an extremely difficult situation. Descriptively speaking, when the light spectrum hits the edge of the "window," it suddenly falls short. This is the most interesting part. For example, the ultraviolet rays from the sun and other immovable stars is out of the observable range of astronomy. In the last ten years or so, some researchers of the sun have used rockets to hurl the scientific instruments above the dense atmosphere of the earth to take a peek at the spectrum of the sun's ultraviolet rays. Such a method has brought back good results. However, from the practical point of view, it is far from being a good method which is simple and fast.

However, Gagarin's space trip has announced that mankind has broken the "window" of the atmosphere. In fact, Gagarin has looked at the universe outside the door.

Observers within the "window" not only have their views restricted, but also the views that come through the small window are blurred by clouds or fog. In broad daylight, the earth's atmosphere diffuses through the sunlight. When the sky is too illuminated, all stars vanish. Besides the sun and the moon, men cannot see any other heavenly body in daytime. Even planets near the sun which are almost as bright as the full moon are drowned in the ocean of broad daylight. It is the same at night. The atmosphere diffuses the light of the moon and stars. This has limited our observation of the dim heavenly bodies.

At this stage, we have been talking about the dissatisfaction of the astronomers with the atmosphere all along. In fact, breaking the bond of the atmosphere is the most urgent demand of the astronomers in the 20th century. History has given a formidable task to astronomy. Everyone knows that mankind has found the law of gravity from astronomical phenomenon, which stirred up a revolution among the academic community. Not very long ago, the theory of relativity has given astronomy a task of experimental proof. However, this task has not been accomplished up to this moment. Nature is conducting various kinds and forms of experiments in the immense universe. Following the development of science and technology, scientific workers of all ages have felt the necessity for absorbing elementary materials from the "space laboratory" more and more.

Let's take the familiar sun as an example. It was first a tremendous mass of atomic reaction which offered us the fundamental clues of nuclear reaction. It possesses fields of high temperature and low pressure which are unfathomable on earth. It demonstrates the experimental

process of all kinds of physical phenomena and also radiates cosmic rays, which have attracted us to explore the cause of origin of such high energy. Its magnetic fields and electric particles are in the process of magnetic hydrodynamic experiment. Its activities include sun spots, flame bursts, lightning-like illuminating bands, variable radioactive explosions, etc. All these signify to us that we should launch our expeditionary forces to explore the mystery of nature.

The laboratory on earth is controlled by man. It helps us to understand nature, exploit nature, and conquer nature. But the "space laboratory" is a huge one. It will help us to make observations, give us enlightenment, and will finally be exploited by us. Astronomy is a science which requires the use of the "space laboratory." Its mission is to expand the scope of scientific observation on earth into space. To an astronomer, who has to observe the sky through the fog and the "window" of the atmosphere, it goes without saying that this is a matter of regret.

The great achievement of the Soviet Union has brought us the signal from Gagarin. Now we may imagine that one day astronomers will break through the earth's atmosphere and fly into space with their telescopes.

It is not inconceivable that the specialists who select the site for observatories will find the most suitable location on the moon. It is also not inconceivable that the enigmas of Mars and Venus and other moving planets will be finally solved and their land will become the field of our inspection. The illuminations of the sun and the stars will be taken over by us without reserve. The earth, as we view it from our spacecraft, will be seen as a strange but friendly and personal heavenly body. The earth's secrets will be doubly revealed to us.

Not many years ago, when man first flew an airplane, it was predicted that flight would become the daily routine of human life. The first cosmonaut who went into space also signifies that men in the 20th century will soon extend their activities into outer space, especially the scientific laboratory, which will expand itself from the earth to space. Today, from Gagarin's trip, we have seen an innumerable treasure of knowledge which is waving its hand to us. Let us cheer for the unrivalled and beautiful scientific future.

## OPEN ACADEMIC DISCUSSION ON THE DEVELOPMENT OF SOIL SCIENCE

[Following is a translation of an article by Li Lien-chieh (李連捷) which appears in Kuang-ming Jih-pao, Peiping, 15 May 1961, page 2.]

Since the great leap forward, soil science has undergone a great change in our country and its quality is now enormously different from that previously. The main differences are that in the past, when speaking of theory, we often had a great deal to talk about. But when meeting production problems, we were simply at our wit's end. Now we have begun to prepare ourselves with ability to solve production problems, limited though it is. In the past, soil science had almost nothing to do with the world. The so-called "soil is soil and agriculture is agriculture; each minds its own business" has become a thing of the past. Now the science of soil has gradually grown to be the vanguard of production. In the old days, the content of soil science came mainly from foreign countries. Today we have secured more sufficient content from the productive experiences of millions of peasants in our own country. Can it be called a change of quality? Or can it be called revolutionary change?

Whether you like it or not, such revolutionary change is an objective fact. Our immediate task is to thrash out all problems in the development of the academic thinking of soil science at the present stage, no matter whether such problems are large or small, fundamental or advanced, and everyone should air his own views without reserve. In this way, it will be possible to systematize the problems so as to find the major issues for free debate in order to enable us to elevate our understanding to such an extent that we will be closer to the objective truth. This will solidify the results which have been attained in the past three years and will push the continued leap forward in soil science forward.

### 1. The System of Thinking in the Science of Soil

For more than three years, the greatest achievement in the development of soil science in our country has been the birth of Chinese agricultural science. Agricultural science now exists in nearly all countries. Chinese agricultural soil science has its own distinct features, which are reflected in its thinking system. Foreign agricultural soil science is different only in terminology, and its content (the important point is the object of service) is different from general soil science. However, the thinking system is fundamentally the same. Basically, it is a dis-

cussion on soil, and, through analysis of the properties of soil, induction is made toward agricultural production.

Chinese agricultural soil science is not so at all. Chinese agricultural soil science began with the general investigation of soil and was produced in the scientific movement of the masses to render immediate services to agriculture. It is not the result of research by a few individuals or several thousand people. It is the result of research and study by several million people. It is not the work which has been done for the purpose of obtaining a certain theory, but the work which has been done with a view to improving agricultural production. Its theory is proposed not from imagination, but from productive practice. Such practice includes not only laboratory or experimental ground, but also agricultural production in various areas throughout the country. It includes not only the experiences of today, but the historical experiences of several thousand years. This is the rapid progress in the development of soil science in our country. It is also a reform in the academic thinking system. However, some people consider changes such as productive technique, peasants' experiences, and a collection of proverbs only empirical and not theoretical, and say that they are not eligible to be regarded in the academic thinking system. We cannot completely agree with such a viewpoint.

## 2. Classification of Soil

Lenin offered the following opinions in his discussion of classification. "Classification should be natural, not purely artificial or at will." The so-called "natural" should be meant for the peculiarities of the object of classification. It also means that classification should be made in accordance with the nature produced in the law of changes. It does not mean that classification should be made according to superficial events and local conditions, the subjective thinking of man, or provisional appraisal. These are purely artificial or willful. They cannot solve the problem of classification because they do not reflect the objective truth. The phrase "not purely artificial" implies that we are always unable to understand completely the objective truth, and human elements inevitably exist. However, classification should be natural within maximum possibility.

At the beginning of the general investigation of soil, sufficiently advanced analysis was not possible owing to the great quantity of data which were of popular nature. As a result, contradiction was bound to exist in the form and content of classification as the relationship between production and science was not sufficiently understood. This is the natural phenomenon of all new things that just come into being. Classification of soil is a long-run and formidable task. Naturally, the problem is not solved by a new set of forms in classification. Rather it is necessary to make the form and content of classification fall into an agreement which will correctly reflect the fundamental theory. This requires that we thoroughly analyze the relationship among production, science, and the masses, and raise the level of our understanding on soil.

Apparently classification is the reflection of understanding, which marks the level and direction in the development of any science. Its level is relative and therefore should be elevated gradually. We change our direction of study from natural soil research to agricultural soil research. As the object of study becomes more complicated, it is very difficult to make a thorough analysis of the internal nature and the external conditions, and arrive at a special law in charge of soil. Under the correct leadership of the Party, our task of soil classification has followed the viewpoint of dialectic materialism and has developed soundly.

It should, however, be pointed out that in our present methods of classification some problems exist which are not very logical. For instance, classification of soil in terms of area has some significance in practical application. In such a task, we are conscious of subsequent reflection on the transient relationship of soil between one area and another. However, such a reflection has not yet been realized immediately. If natural soil has a definite transient relationship, agricultural soil should also have the same. For agricultural soil and natural soil, though different, possess a common species of soil in a natural body and a peculiar fertility. Agricultural soil has a peculiarity of economic fertility which will not negate its relationship with natural soil.

In one area, when transient relationship has occurred in the soil, such a relationship should become closer. We cannot consider that the soil of cultivated land develops independently. Take the soil in the area of North China for instance -- grainy yellow soil, muddy clay, compound soil, black soil, red sticky soil, flood soil, and alluvial soil, etc. Except for their different conditions of formation, different fertility, and different value in exploitation, what are the relationships in their changes? It is necessary to find the answer.

The use of dry lands and watered fields as two major categories for classification of soil is an artificial method. It does not reflect any internal relationships among them. For this reason, we feel that it leaves much for consideration in our intention to use the form and content of classification as reflection on our theory. For if we deviate from the purpose of serving production, we shall often go astray in our guiding principle. The blind man's touch on an elephant is motivated by the desire to know what the elephant is like. It is very possible that he has no particular demand on the elephant. For this reason, he may find, according to the different position of his touch on the elephant, that it is like a wall or a post. In soil classification, soil may be just a natural body of different forms and colors if it is entirely separated from the purpose of production. However, if we only emphasize purpose and do not strictly adhere to the spirit of seeking the truth from the fact, we become unscientific, and then classification will become the lining up of phenomena.

### 3. Contradictions between Man and Agricultural Soil

In the process of changes in agricultural soil, there are various

kinds of opinions and analyses on the question of what are the main contradictions and the important aspects. Some people have regarded the function of man as the important aspect in the main contradiction of soil changes. Others have treated the function of man as an external condition. Man has subjective animation. He is the sponsor for reforming nature. Man can make water flow in the opposite direction. Man also can make the sky rain. However, all these are the results of applying scientifically the laws of nature when man has learned the laws of natural phenomena. But the function of man cannot be a substitute for the process of contradictory movement within a material object. Therefore, it is worthy of consideration to regard the function of man as the important aspect in the main contradiction of soil changes.

In our daily life, man has created various kinds of vehicles for communication and transportation. It is also necessary to have men to drive these vehicles. But man cannot be a substitute for any contradictory aspect in the static forces and dynamic forces of machinery. Man has selected and nursed innumerable species of animals and plants, but man cannot be a substitute for any aspect of contradiction within the biological and physiological processes. Man's function in relation to soil is therefore no exception.

When we propose to deeply analyze the laws of internal movement of soil in order to find the main aspect of contradiction, we have not the least intention of making light of the subjective activity of man in the reform of soil and entire nature. We must firmly believe in the Party's policy and correct any unilateral views in our past study of soil. We should take the social factors as well as the natural factors into account in order to arrive at a unified and dialectic understanding of the development of soil formation. However, the main contradictory problems in the process of soil formation still depend upon man's exploration into the contradictory peculiarities in the soil. He will never take part in a certain aspect of contradiction.

#### 4. The Fundamental Structure in Soil Science Cannot Be Neglected

At this very moment, we feel that under the leadership of the Party, we have found the purpose and direction for the study of soil. However, we lack sufficient understanding about the soil itself. In the general investigation of soil, we have discovered that the old classification of properties and constitutions in theory is separated from the reality of production. Our productive experiences and knowledge are still far from sufficient, and our knowledge concerning the basic composition and property of soil is still problematic.

I am of the opinion that any structure is erected with small pieces of bricks, tiles, and cement. Selection or rejection of such basic materials is inseparable in the thought of an engineer. The academic system of thought is also inseparable from the understanding and knowledge about the materials of composition in an object of study. The Jews have a proverb, "New wine cannot be contained in an old bottle."

We are still using the old concept regarding the property constitution and solution. This problem is worthy of our further consideration.

In order to develop the soil science of China, we must, under the leadership of the Party, get together with the broad masses of peasants and penetrate into the understanding of soil. At the same time, under the Party's policy of "letting 100 flowers bloom and letting 100 schools of thought contend," it is necessary to grasp the important points without overlooking any small problem, and open academic debate in order to enable us to approach closer to the objective truth and to make soil science become a practical science.

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## NATURE OF ACADEMICS IN PSYCHOLOGY

[Following is the translation of a news item in Kuang-ming Jih-pao, Peiping, 16 May 1961, page 1.]

Recently psychology workers held a series of three roundtable conferences to exchange ideas within the limits of psychological studies in order to carry out the policy of "letting 100 flowers bloom and letting 100 schools of thought contend." An initial step was taken in developing the discussion of various viewpoints on academic problems.

At the conference, people were of the unanimous opinion that this policy of allowing free contention of thought could help make scientific research prosper and speed up psychological development.

Since the great leap forward, there have been relatively large amounts of development within the limits of psychology. Both with regard to correlation of practical facts in order to solve problems of active participation, and from the theoretical and pedagogical points of view, there have been definite results. The achievement of these results cannot be separated from the policy of allowing full contention between all the schools of thought.

Each speaker was able to present his own opinion and say what he wanted to say. They discussed their opinions on problems of theoretical and scholastic psychology. Although there were differences of opinion they were able to talk about practicality and reason without a show of temperament. Many comrades hoped that there would be large-scale conferences in the future, accompanied by the organization of small-scale discussion groups, for the timely exchange of research results and discussion of work conditions. This will allow the further blossoming of the scholastic atmosphere among the psychologists.

The main problem being discussed at this conference concerned the academic nature of psychology. The great majority of comrades present regarded the main problem as being the present urgency and necessity of starting and entering penetrating research and discussion on scholastic and theoretical problems in psychology.

Although in the past few years there have been several exhaustive discussions centered around these problems, there still exists a difference of opinion. Although not a few psychological workers agree that psychology is an in-between science, there is still a difference in the understanding of what an in-between science is as indicated by active participation in teaching and scientific research in the last two years.

Although all agree that psychology manifests both a sociological

nature and a natural science nature, some believe that its sociological aspect is in the forefront, while others believe its natural science aspect leads. Still others believe that it is not possible to determine which aspect is in the lead.

With these differences in belief, there is a definite difference in the management of work activities and thus a difference in planning for cadre training. Therefore, they believe that problems in its academic nature are important scholastic and theoretical problems, which will influence the development of psychological research at all times.

They also believe that after two years of practical work, the introduction of these problems for consideration is quite appropriate and timely. Because under these conditions it is possible at a new and higher level, not only from the theoretical point of view but also from the summarization of the last two years' experiences, to discuss problems concerning the academic nature of psychology.

At the conference there was a minority which had a different estimate of this. These people believe that problems of the academic nature of psychology have been basically solved. Even if they have not been solved, they can be left for discussion by specialized researchers on science classification, and it isn't necessary to discuss these problems at the present time.

Individual comrades, however, believe that for the convenience in discussion, it might be possible to narrow the scope of the problem a bit, and make it more definitive. For instance, they can discuss the relationship between psychological phenomena, sociological phenomena, and physiological phenomena. When this problem is solved then the problem of the academic nature will have also been solved.

At these conferences we can sum up the opinions on the academic nature of psychology into the following three types.

The first type believes that psychology is a natural science, or at least an in-between science leaning towards the natural sciences. Those who hold this belief include Chou Hsien-keng (周先庚) and Wu Sheng-lin (吳生林).

Chou Hsien-keng says that certain scientific classification researchers place psychology among natural science, sociology, and philosophy, with a leaning toward logical philosophy. The classification can be accepted. But if we are to insist on its in-between position, it is impossible not to give rise to difficulties.

He also believes that it is not impossible to place psychology, from its present condition in this country, among the natural sciences. This is because, as we can see from the developmental history of psychology, whenever we have placed it among the natural sciences, we have always made it advance one step. Whereas, whenever we have placed it among the social sciences, it has always regressed one step, or remained stagnant.

Ts'ao Chi-kang (曹知剛) believes that there is much to be thrashed out in regard to what Chou has said. Ts'ao believes that we must differentiate between the sociology under the leadership of Marxism-Leninism, and the idealistic pseudo-scientific sociology.

Wu Sheng-lin believes that psychology is a natural science. He raises the following main points to support his belief. (1) Psychology's society limiting nature cannot classify it as a social science. This is because we do not call physiology a social science, even though the human physiological process is also limited by society.

(2) The physiological process and the psychological process are both aspects of the same thing. They are identical both in time and space. Therefore, our research into these processes utilizes the same process.

(3) We must differentiate between psychology and consciousness (or discernment). Psychology is a tool of discernment. It can be of service to all kinds of thought and discernment. Therefore, psychology does not possess class nature. He strongly believes that psychology must strictly use natural science methods to do research in psychological phenomena. He also says that use of literary works in explaining psychological phenomena is an unhealthy sign.

The second type opposes the idea that psychology should be regarded as a properly centered in-between science. They believe that the in-betweens also have a leadership aspect. Human psychology's leadership aspect is sociology. Therefore, the sociological aspect of psychology should be in the lead. Those that hold these views include Tu Wang-hsiang (杜王香) and Chang Pi-yin (張比音). The latter believes that, should we allow the guiding aspect to determine scientific nature, then we could classify psychology as a social science.

Tu Wang-hsiang mainly bases her explanation on her research observations of the disciplinary nature of primary school age children. She uses the effects of the children's sense of discipline when they join the Youth League to explain the effect of social nature on the special characteristics of school age children's psychology. As a result, she believes that the social aspect of psychology should be the guide.

Chang Shih-min (張石民) cannot agree with these observations. He believes that the examples she has raised should be the subject of study by those doing research on pre-school education. They do not belong to the bounds of psychology. Otherwise, psychology would be undertaking a burden that it cannot bear. This would be unfavorable to the development of psychology.

The main points in support of Chang Pi-yin's belief that psychology should be called an in-between science leaning towards sociology, or even a social science, are (1) When we consider all other in-between sciences, we see that they all have one leadership aspect. These sciences have all been assigned to the field of science that the leadership aspects typify. For instance, bio-chemistry is considered to be biology.

(2) Although the two signal systems have mutual effects, the second signal system occupies the dominant position.

(3) Although we can do research on the brain, this complicated objective is already being studied by other sciences. Psychology need merely use the results of these studies. However, active participation in teaching requires that we urgently understand children's thinking. There

is no science that is doing research in moral features of the subjective world. Psychology should study the subjective world of mankind.

(4) Academic nature is determined by the principal aspects of contradiction. In the study of psychological phenomena sociology is the dominant aspect in the contradiction between nature and society. Because of this, we should classify psychology within the limits of social science.

The third type believes that psychological phenomena are complicated and are the unification of nature with society! Therefore, they insist on the in-between principle. Those who hold these views include Wang Lin (王玉林), Chang Hou-tsan (張厚生), Ts'ao Chuan-yung (曹傳永), Ch'eng Nai-yi (程乃貞), Chang Shih-min (張石民), Hsu Shu-lien (徐淑蓮), and Wang Ching-ho (王景和), etc. They all expound their own beliefs from various angles.

For instance, both Chang Hou-tsan and Chang Shih-min strongly insist that psychology studies psychological form and not the contents. The study of the contents of psychology is the job of various sociological sciences. In the study of the form, it is necessary to "consider" the contents, but the two should not be mixed.

Ts'ao Chuan-yung believes that psychology should study its beginning and development. The process is one of transition from the natural to the sociological. Therefore, it is not a pure natural phenomenon, nor is it a pure sociological phenomenon. Psychology should not answer the question of "what is being thought about?" but it should solve the problem of "how it is being thought."

Hsu Shu-lien and Wang Ching-ho made joint remarks. They use the example of the effects of psychiatric treatment in the consolidation of foreign and Chinese medicine, and insist that psychology should be considered an in-between science. Psychiatric treatment includes political mobilization, the teaching of medical and psychological knowledge, and individual counselling.

Medical psychology must consider the patient's social surroundings. But medical psychology should not be centered on research in politics or medical knowledge. Rather, it should do research in political mobilization to see how medical knowledge can mobilize the patient's mental condition. It should do research on how to make social conditions pass through natural conditions in order to be effective on the human body. Only in this way will it be possible to make medical psychology effective in the treatment process.

The above three types of opinions merely made an initial suggestion of their individual beliefs so that they could effect an interchange of ideas at the conference. Everybody felt that this conference had a relatively good beginning in the new discussion of old problems of scientific nature.

Quite the opposite from previous occasions, the discussions this time seldom originated from concepts, but originated mostly from concrete research and teaching activities. From what we can see, the key to the differences of opinion lies in the difference of understanding what psy-

chology is and the relationship between psychology and discernment.

Some believe that psychology is discernment (or consciousness). Others believe that psychology is but a portion or an aspect of discernment. Still others believe that psychology is a tool of discernment.

The solution to this problem cannot come simply from theorizing. It is necessary to investigate the practical conditions, and what questions active participation raises for psychology. This requires a further step in research, based on investigative research work, in order to mutually supply truths and facts, so that we can see what tasks are given to psychology by education, medicine, labor, and theorization. How are we to take care of these tasks? In the solution of the problems involved, what sort of a science nature should psychology have?

If we start from practical truths and raise the problem to that of theorization, we will avoid a lot of differences in understanding classical methods. Many people were of the belief that the conference did not merely indulge in isolated inspection of academic psychology. It was able to consider problems based on conditions in the entire limits of science and the place in it that psychology occupies. This is a wonderful beginning.

At the conference they also brought up certain important theoretical problems that required consideration. For instance, what are the contradictions of the objectives of psychological research? Chang Hou-ts'an believes the principal contradiction that reflects procedures is that between the subjective and objective points of view.

Ts'ao Chi-kang feels that they should consider the specialized contradictions in the field of psychology. He also believes that the contradictions between sensation and thought, recognition and individuality, etc., are the special contradictions of psychological objectives.

Kuo I-ts'en (郭一岑) and Ts'ao Chuan-yung, on the other hand, brought up the problems concerning evaluation problems of psychological tests. These questions in actual nature all involve problems of scientific nature. They await further research and discussion by our psychologists.

THE PROBLEM OF "ASSOCIATING THEORY WITH PRACTICALITY"  
IN NATURAL SCIENCE RESEARCH

[Following is the translation of an article by Chou Chien-jen (周建人), Chairman of Chekiang Provincial Government, in Kuang-ming Jih-pao, Peiping, 29 May 1961, page 2.]

Living people must be maintained with material such as food, clothing, drinking water, (where source of water is ample this does not seem important), housing, etc. Besides these, they must have production tools and transportation equipment. These are very important and without them he cannot live.

Marxism has always opposed Malthus's theory of population. However, Marxism does not disregard population problems and realizes that the truth has to be discussed. Population is definitely increasing incessantly. As the population rises, requirements for foodstuffs and housing also increase. Marxism, however, is opposed to Malthusian views that population will become surplus. It believes that labor power will increase along with population increases. Of course, consumption will also increase because individual laborers and their young children will all be consuming things.

As for land, there are today many places where land has not yet been tilled or properly utilized. This is a source of livelihood materials, but is not the final guarantee in the solution of population problems. The guarantee of a thorough solution of livelihood problems is natural science.

The facts prove that when we improve technology, do scientific research, and unceasingly develop productivity, in many places where populations have increased, they were not only able to avoid deficiencies in livelihood materials, but were actually able to make them more plentiful. The facts also prove that scientific development is unlimited, its ability to supply our needs is inexhaustible. These facts are all indubitable.

Since we have already explained the important nature of science, if people are to continue living then they must study science. Socialist reconstruction will also not be able to do without it. As we have already mentioned, in order to live we cannot be without food, housing, production tools, and transportation. If we want to develop these items, increase our production, and raise the quality of production, we must involve ourselves in many scientific departments.

Take for instance, the quest of increased grain production. This

would involve the knowledge of these multitudinous sciences; soil and fertilizer chemistry, botanical physiology, studies in genetic changes, entomology, bacteriology, virology, as well as agricultural equipment manufacture, and electrifying irrigational facilities.

Mankind, in keeping alive, must seek good health. Medical and sanitation problems will also involve many sciences. With imperialism still in existence, we must build up national defense. This also requires many sciences. We shall temporarily leave the last two aspects alone.

In a capitalistic society, they are producing, making production tools, and utilizing sciences, but their methods are collegiate. They depend upon experts to do their research and inventive work. Although their workers and other sections of the masses sometimes also make discoveries and have creations, still their basic policy is to depend upon the experts.

In a socialist society this is not so. Science belongs to the people and works for the people. Therefore, it is carried on by all the masses under the leadership of the proletariat. Everybody looks for problems, finds methods, and solves the problems. They destroy the barriers and difficulties that interfere with the development of production in order to progress rapidly.

In a society where they do not depend upon the masses but only upon the experts, they are being unilateral. They only see one-half of the problem. However, if we only depend upon the masses and leave the experts alone, the situation will be the same; it would also be unilateral.

Marxism made no mention of this. The originator of Marxism definitely looked up upon the masses and often talked about the power of the masses. He mentioned about workers inventing the spinning machine, etc. But he did not overlook the experts. For instance, Engels in his work, Outline of Political Economic Criticism (1843, originally published in the Franco-German Yearbook) said, "In this century, in chemistry alone, what an enormous amount of progress Lord Taffy (1778-1829; eminent British chemist and originator of electro-chemistry) and Liebitsch (1803-1875; eminent German chemist and originator of agricultural chemistry) were able to bring to agriculture."

In the early stages of socialist reconstruction, there was a period when expert and non-expert masses were divided. In construction work it is absolutely necessary to have a close association of the experts with the masses, otherwise, the work could not be universal.

Until the time when we achieve total mechanization and electrification of production, when the working classes will have even more time for studying and research in science when everybody will have a high degree of cultural knowledge or becomes expert; since we are today not sure of what will happen then, we must still associate the two. If we favored one at the expense of the other, there would be losses. The benefit of the revolution is the measure of how much association should be kept up.

When socialist science becomes liberated from the limits of the old society's collegiate circles, of course its boundaries will be enlarged.

Promotion of technical reform has hastened scientific research. The science of socialist society must be deep and all encompassing and cannot be narrow or superficial. Its development is rapid and boundless.

The word "science" itself indicates systematic knowledge; knowledge that is systematic in theory. Sectionally experienced knowledge cannot be called science. Nor do various technical measures themselves belong to the scientific system. But technical reforms do promote science and scientific theorization does direct active participation.

If we look down upon scientific theorization, we are actually denying science itself. Natural sciences were developed to meet actual requirements. They have been elevated through gradual systematization and meticulous development. This system or body was not thought up by the brain of "wise men." On the contrary, it was formed through research of actual conditions of natural phenomena and through detailed digging. Everything is based on practicality; nothing is based on empty-thinking.

The deeper we dig into natural sciences, the further we will understand natural laws. The results will be that nature will have less effect in directing the lives of human beings and human beings will be better able to handle nature. If we limit research to the bounds of a very narrow space and neglect theorization, we would, of necessity, hinder scientific development and not promote it. This would delay our ability to handle nature.

I am of the belief that under socialism the opening up of science will be even wider, the digging even deeper, and will result in an even higher degree of development.

In a capitalistic society, their slogan for scientific research is "science for science's sake." This kind of slogan is "liberal" and unsuited to socialistic ideology. The capitalist society doesn't have long-range plans and was built to seek temporary benefits. Its science naturally adopts a liberal attitude.

Socialist society is planned and is a society that possesses far-reaching ideals. So naturally scientific research must combine theory with practice. That means, according to my understanding, that theory is combined with the practicality of socialist reconstruction and the practicality of communism. It has a clear purpose; that is, service to mankind, service to the construction of a new society; and finally, liberation of the entire mankind; but for no other purpose.

Of course, science depends on actual participation. This includes on-the-spot experimentation and research as well as laboratory experimentation and research. Nor should we neglect theoretical research. If we limited ourselves to actual participation and the limits of sensory knowledge, it would be difficult for us to enlarge scientific research boundaries or delve deeply into science.

Sometimes we also divide science into two parts. We call research into the nature and developmental laws of natural phenomena theoretical science. Then we call that research which seeks useful results from nature practical science. According to Mi-ting I-hsi-chin-k'o (米定易希金可), "The two branches exist in the midst of mutual effects of dialectical

method." The true nature of theoretical science is more standard, but it must rest on actual participation.

On the other hand, if practical science does not borrow from theoretical science, it will also not do. In summarization, no matter which branch of science we do research in, the researcher must have thoughts which are centered on service to socialist reconstruction. I repeat, the combination of theory with practicality means the combination with the practicality of socialism.

The guiding nature of "the combination of theory with practicality" with respect to work is very important. We must have an accurate understanding of this. On the two sides of this bright road there are two muddy ditches. One of them is the ditch of liberalism's "science for science's sake." The other ditch is the narrowness of pragmatism which disregards theory. No matter into which ditch we mistakenly fall, it would interfere with future development of natural science development. This means that it will also influence the speed of socialistic development.

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### III. ECONOMICS

#### A TREATISE ON THE STANDARD OF PROPORTIONAL VALUE IN THE EXCHANGE OF EQUIVALENT VALUES

[Following is a translation of an article by Ch'i Chi-sheng  
(齐琪生) in Kuang-ming Jih-pao, Peiping, 15 May 1961,  
page 4.]

In the relationship of merchandise exchange under the socialist system, it is a very important problem that mutual exchange between materials and labor must strictly adhere to the principle of exchange in equivalent values. Correct understanding of and thorough penetration into such a principle has a practical significance in the prompt development of socialist economy in this country. Correct understanding of the proportional value standard in the exchange of equivalent values is a self-conscious application of the equivalent value exchange principle, which will spur upon the necessary premise of economic development. On the problem of the standard of proportional value in the exchange of equivalent values, divergent opinions exist. In the present treatise, the author attempts to offer his humble opinions on various points and shall appreciate enlightenment from all comrades.

It is common knowledge that in a society of commodity production, the economic relationship among men is necessarily going through the form of product exchange in order to realize the exchange of labor. For this reason, in the process of mutual exchange, the proportional value standard in the exchange of goods necessarily becomes a problem of great concern to both parties. Marx pointed out, "The problem which is of realistic concern to the product exchangers is how much products they receive from other people in exchange for their own. In other words, in what proportion the products should be exchanged." However, for the exchange of different products, a definite proportion should be fixed. The first step toward this end is to convert the products in question into things of common denomination. The value of goods is the common denominator for different kinds of goods. For this reason, the problem of fixing the standard of proportional value and correct understanding of the problem in fixing the quantitative value are inseparable.

On the measurement of the standard of the quantitative value of goods, Marx clearly pointed out, "It should be measured in terms of labor. The labor quantity is to be measured by the time of labor, such as hours and days, etc." Labor, as pointed out here, is apparently the mental labor which constitutes solid value, and is being treated as individual physical labor or collective physical labor. If each personal physical

labor or individual physical labor in the production of commodities is purely regarded as equivalent to human labor, it will become the invariable human labor and constitute an organized part of the total social labor power, which will create applicable value for the society. If various kinds of personal labor and individual labor are considered to be the same human labor power or an organized part the total social labor, then the average of their total sums will constitute the average labor of the society. Such average labor of society not only can be the common standard of equalization and unification for various kinds of personal labor or individual labor, but also can be the necessary common standard for measuring the value of commodities.

According to this standard, it is possible to measure the quantitative value of commodities produced by various kinds of personal labor and individual labor. Marx said, "So long as the labor power of each individual is of the nature of social average labor power and is to be so used in the commodity production with necessary average time of labor, it will be same human labor power." That is to say, to determine the standard of commodity value, it is necessary to base upon the kind of human labor power which is of the nature of the average social labor power to measure the necessary average labor hours of society in the commodity production of a certain unit.

After all, what is the broad sense of the standard for the necessary social labor hours which is constituted by the fixed value of commodities? Marx clearly pointed out, "By this we mean to say that under the productive conditions of the present social standard, the labor hours necessary for producing any one of the applicable values with the average social labor proficiency and capability." He also said, "When the object has been transformed into valuable labor it is the social labor of an average nature and hence is the consumption of average labor." From this we may see that determination of commodity value which constitutes the standard social necessary labor hours is entirely to be judged from production process. It is totally different in nature from that to be judged from the circulation process. The former is determined in accordance with the necessary average social labor hours in the production process of each unit of production quantity for each commodity. It regulates the formation of the quantitative value unit of each commodity. Marx indicated this in his book On Capitalism. The latter is to be judged in circulation process from the law of supply and demand which affects the total social labor hours in distributive proportion of all productive departments. It regulates the realization of market value standards of every commodity and changes it into price (or production cost).

The two are mutually unified and mutually contradictory, but they cannot be vaguely mixed into one. Nor can we use the latter to explain the former. In reality, the former restricts the latter and the former is the foundation of the latter. Before the commodity value is realized in accordance with the standard of the social value, it has been formulated according to the necessary social labor hour standard in the production process. Its quantity has been determined in line with the standard of

the productive power of social labor. It is not affected by the relationship of supply and demand, which will increase or decrease its practical quantitative value. The relationship of supply and demand can only affect the quantitative value that is being realized in the exchange process. Such quantitative value is not in unison with that originally realized in its formation. There is always a difference in between.

Another difference is the necessary social labor hours which determine the commodity value and formulate the standard. It is the same difference of the necessary social labor hours which specifies the realization standard of commodity value. It is also the difference between the practical value condensed by the necessary social labor in the production process and the social value specified by the necessary social labor hours due to distribution of supply and demand relationship in the circulation process. Since the two have a quantitative difference, they cannot be considered as equivalent at random.

At the same time, the social value which determines the realization standard of the commodity value is fundamentally restricted by the necessary so-called social labor quantity in the formation of commodity value. For the change in labor productivity and labor consumption in the commodity production process is the fundamental factor in determining the change of the relationship of supply and demand in the circulation process. The distributive proportion in the total quantity of the necessary social labor produced by the relationship of supply and demand and the effect on the quantity of commodity value realization are the change in the quantitative relationship of the commodity's applicable values. In other words, through the change in the supply quantity of commodities, the quantitative value of commodities is made to change. Therefore, in the study of the value standard of commodity exchange in equivalent values, it will do well to make a good distinction in the two different kinds of broad senses between the necessary social labor hours which formulate the commodity value and the value realization of commodities.

In particular, we should determine the fundamental standard of equivalent value exchange in accordance with the necessary social labor hours in the process of commodity value formation. As for the problem of the necessary social labor hours in the process of commodity value realization, it falls into the scope of value transformation into price in the circulation process and therefore should be consolidated with the price problem for further exploration.

In their study of this problem, some comrades have indiscriminately mixed up the two broad senses of the necessary social labor hours into one, and mechanically referred to the tenth chapter, Volume Three, of On Capitalism on several points concerning the realization standard of commodity value and explained the determining factors in formulating the standard of commodity value. Hence, they considered that there are two factors in determining the quantitative value of commodities: (1) The necessary social labor hours in the production process, i.e., the standard labor productivity. (2) The distributive proportion relationship of the necessary social total labor power in all departments, i.e., the

relationship between supply quantity and demand quantity in the realization of commodity. Such opinions are not only the dualism of commodity value standards, but also tend to fall into the muddy pool of the theory of supply and demand value, which is untenable.

If the concept of necessary social labor is properly understood in its broad sense, then we may realize without doubt that the standard of proportional value in the exchange of equivalent value commodities is based upon the necessary social labor hours which formulates the solid value in the production process. For this reason, the proportional value relationship in the process of equivalent values of commodities exchange is the proportional quantity between the time consumed in the production of one commodity and the time consumed in the production of another commodity. Marx said, "Various kinds of commodities which can be produced with labor in equal quantity or in the same labor hours have the equal quantitative values. The ratio between the value of one commodity and the value of another is equal to the ratio between the necessary labor hours for producing one commodity and the necessary labor hours for producing another."

Nevertheless, the standard of proportional value in the exchange of equivalent value commodities cannot be directly measured by labor hours. It must go through the exchange of materials and will present itself circuitously in different forms of equivalent value. Only in such a manifestation of equivalent value can the necessary social labor hours in equivalent quantity for the production of commodities be totally embodied. At the same time, the personal labor or individual labor which produces the commodity will change into necessary social labor power which will be recognized by society and measured as equivalent by society. The necessary social labor hours which formulate the manifestation of equivalent value in its solid being are to be determined generally by the enterprising units of mass production of commodities under the average social productive conditions with average labor facilities and average labor capability.

Consequently, the number of hours of proportional value standard so manifested is always different, to a certain degree, from the total hours of personal labor or individual labor. For the same kind of commodities in the same unit of productive quantity, individual labor hours consumed by the superior producers whose productive conditions are comparatively higher than the average social productive conditions are bound to be less than the average social labor hours. The individual labor hours consumed by the bad producers whose productive conditions are comparatively lower than those of social average are bound to be more than the average social labor hours. Only those whose productive conditions are equal to average social productive conditions will consume individual labor hours equivalent to the average social labor hours.

Hence, only the individual value of the middle class products can be equivalent to the social value which is based upon the average necessary social labor. The individual value of the superior products is smaller than the social value; while the individual value of the bad products is greater than the social value. Since the standard of proportional value in the

exchange of equivalent value commodities is to be realized in accordance with the social value and therefore as a result of the exchange, it is only natural that the consumptive labor power of the middle class producers will gain the equivalent quantitative value in return and the superior producers will gain profits, while the bad producers have to suffer losses.

In the society of simple commodity production and capitalistic commodity production, the formation of the necessary social labor hours which serves as the standard for the exchange of equivalent values is produced through self-development due to the effect of the valuation law and the fundamental economic law of capitalism. Furthermore, it still cannot directly present itself in totality. It can enable the producers to improve technology in order to reduce the production costs and to raise the labor productivity pushing the backward to become progressive.

However, on the other hand, it gradually accelerates the dis-integration and collapse of the medium and small producers, which will help the big capitalists to grow and to gain profits and hence opposition was prevalent in the contradiction between individual labor and necessary social labor. Under the system of socialism, the consumption standard of necessary social labor hours in the material production is to be determined by the Party and the State through the self-conscious application of the socialistic fundamental economic law and national economy in accordance with the law of proportional development. The State must not only popularize technological revolution, introduce new techniques, use new machines in order to endlessly raise labor productivity, formulate quotas in advance, and gradually lower the necessary social labor hour standard; it must also make great efforts to popularize the advanced experiences, renovate the out-of-date techniques, open labor contests, carry out grand cooperation of communism and positively push the backward units to attain the level of the advanced units. Consequently, the opposition to the contradiction between individual labor and necessary social labor will vanish and the gap in between will also narrow as time goes by.

The above-mentioned standard of equivalent value exchange of commodities, in the normal process of commodity exchange, is generally centered upon the social value which is based upon the average social labor hours. Under the normal circumstances of commodity production, the enterprising units of medium productive conditions are constantly greater in number among productive departments and therefore occupy the position of command. Their commodities are also remarkably outstanding in quality. The enterprising units of superior or bad productive conditions are smaller in number and therefore their commodities only occupy a secondary place in the market. In addition, the individual value of the two, due to the influence of the average social value, has developed a tendency of mutual offset and compensation towards equalization.

As a result, the average labor hours consumed by the enterprising units of medium productive conditions constitute the standard of social value and hence become the center of normal proportional value in the equivalent value exchange of commodities. Only under extremely peculiar and accidental

conditions will the enterprising units of superior and bad productive conditions occupy a relatively more important place in all departments and their commercial products will capture the market in large quantity, which will constitute a power which cannot be set off temporarily.

It is therefore necessary to determine the social value of commodities according to such an individual value at this time. Otherwise, the normal social value which is based upon the average social necessary labor hours will absolutely not be the center of proportional value. Moreover, other value standards will arise as the new center of proportional value. Neither is it possible for two centers of proportional value to exist side by side in one commodity market at the same time. Nor can there be a normal center of proportional value based upon the average social value as standard as well as a peculiar center of proportional value based upon a higher or lower individual value as standard. Marx pointed out as follows, "Market value, on the one hand, ought to be considered the average value of commodities produced by a certain department, and on the other hand, must also be considered the individual value of commodities produced by a certain department under the average conditions (the products have a remarkable large quantity in the department concerned). Only under extraordinary circumstances will it be possible for the commodities produced under most favorable or most unfavorable conditions to determine the market value and to become the center of market manipulation." He further said, "If the total quantity of commodities which have been delivered to the market remains unchanged, the value of commodities which have been produced under bad productive conditions cannot be equalized according to the value of commodities which have been produced under superior conditions so that the major part produced under bad productive conditions will be greater than the middle one and the other extremes and thus constitute an outstanding enormous quantity. If so, market value or social value is determined according to the large quantity or bad productive conditions."

Some individual comrades misunderstood such a fundamental principle and misinterpreted the Party and Government's policy of foreign and domestic method amalgamation, which uses higher subsidiary prices to maintain production by the domestic method. They have considered this an indication that the Chinese market has two standards of value, one based on the average social value -- the official adjusting price stipulated by the State plan and the other is the special subsidiary price based upon the individual value of production by domestic methods. The two can co-exist side by side and also can be the standard of proportional value. Such an opinion is due to the misunderstanding that the subsidiary price policy of the State toward production by domestic method is similar to what Marx pointed out -- that under extraordinary conditions, the market price of commodities of inferior quality is remarkably prevalent in the market. But they do not understand that such subsidiary prices only take effect in the purchase by the State of products manufactured by domestic methods. Adjustment is to be made in accordance with the official prices of the State. As such, it cannot replace the official regulating prices or the State official prices. Nor can it become the general market price. Therefore,

as such kind of views are incompatible with facts, it is hard to win approval from others.

The realization of commodities in the exchange of equivalent values should be based on the fundamental principle that the social value is the standard of proportional value. In the exchange process of realization, it is necessary to demonstrate in forms that commodities of equivalent value in equal quantity have equal prices. Value and price must be in unison. This is the fundamental demand of valuation law. However, in the commodity market, due to the effect of non-equilibrium of the supply and demand relationship, price usually runs away from value; and hence a definite difference exists between the two. Nevertheless, price is always based on value, no matter how far apart the two run. Price goes around the center of value and fluctuates and always tends to approach value. Moreover, the total of prices and the total of values are always in unison. Therefore, in adjusting the proportional value relationship of various kinds of commodities and in fixing the price level, it is still necessary to use social value as the standard of proportional value, which is an important basis, positively execute the exchange principle, and narrow the gap between price and value in order to promote the prompt development of commodity production and the normal course of commodity exchange.

The fundamental policy of the socialist state for the standard of proportional value in the exchange of commodities is based upon the principle of equivalent value exchange using social value as foundation.

Plans are made to narrow the gap between price and value and to gradually practice the policy of price stabilization and price reduction. Since the Liberation, the Party and government have formulated such a policy. Owing to the ruthless long-term exploitation of the broad masses by the Kuomintang reactionary regime, inflation was on the rampage and consequently a certain unreasonable historical mark was left behind in the form of prices to the present socialist state and cannot be immediately liquidated.

At present, the proportional value for the prices of various commodities cannot be completely based on the social value as standard so that the price reduction policy cannot be totally practiced. In accordance with the level of socialist productive development at the present stage in our country, and with the requirements of the broad masses for improvement of their livelihood, we can only adopt the policy of price stabilization within a definite period on the one hand and practice another policy of price stabilization that the fundamentals are unchanged but individual cases are to be adjusted in order to insure that the masses will enjoy a steady life and to basically eliminate forever the disaster of price fluctuation left behind by the old society. On the other hand, we must leave no stone unturned in adjusting the price difference of various commodities, price difference between wholesale and retail, price difference due to locations and seasons according to the socialist fundamental economic law and the demand of valuation law. We should try our very best to determine a reasonable proportional value for them in accordance with the social value.

Furthermore, the indispensability of the equivalent value exchange principle must be repeatedly stressed and explained in various policies

to the people's communes in the rural areas. This will enable the price system of socialism in this country to approach perfection day after day and the proportional value standard will become more reasonable with remarkably enormous results. In particular, the endless readjustments in proportional value for the industrial and agricultural products have enabled the proportional value index to decrease by 23.3% in 1957 as compared with 1950. This has greatly improved the extremely unreasonable differences between the agricultural products and the industrial products. As a result of China's being in the half-colonial and half-feudal position for a long time, the level of development in agricultural production has been especially backward. The masses of peasants used only simple and crude farming implements in their hand labor. For this reason, the unit of productive quantity consumed more necessary social labor power. In the commodity market, the agricultural products which had been produced under bad productive conditions were remarkably great in quantity. The social value was higher and the market prices were greater.

However, due to the ruthless oppression and exploitation by the imperialists, feudalists, and bureaucratic capitalists, the domination of the cities over the rural areas and industry's squeezing agriculture were particularly violent. The prices of agricultural products were forced to reduce to the level beneath their original value; while the prices of industrial products were illegally raised above the level of their worth. Hence, an extremely great gulf of non-equilibrium existed between agricultural products and industrial products, which threw agricultural production into a most unfavorable position. Under such circumstances, it hastened the poverty and bankruptcy of the peasants and sharpened the contradictions between industry and agriculture, the cities and the agricultural areas.

Therefore, after the Liberation, the Party and government powerfully adjusted the proportional value of the cotton and grain without interruption which has diminished the difference between agricultural products and industrial products. From now on, we must continue to take one step forward in promoting the prices of the essential agricultural products in order to enable their proportional values to come closer to their social value. This will also speed up the exchange relationship in industrial and agricultural products to be carried out in accordance with equivalent value exchange principles.

Although the fundamental price policy of a socialist state is to use the social value as proportional value standard for carrying out the principle of equivalent value exchange; it does not necessarily mean that in a special case we cannot adopt temporary measures to make the prices adequately out of line with their real worth. In practice, the socialist states have always adjusted the market prices of certain commodities to be out of line with their true value for a definite period of time within a certain limit letting their proportional value become greater or less than the social value in order to balance the supply and demand relationship. For example, the price of the high-class consumer goods for a small minority of people is to be raised above their worth in order to balance the production and the consumption of these goods.

Owing to the unprecedented natural calamities which agriculture suffered in the years 1959 and 1960, the speed of productive development has not been able to keep up with the speed of growth in the social requirements. The government still adopts the original policy of price stabilization with respect to the commodities of social production which are required by the people's livelihood. Only the prices of a few commodities which are consumed by only a small minority of people have been raised above the level of their worth. This is only a temporary and partial phenomena. We absolutely cannot consider this to be contradictory to the principle of equivalent value exchange which is determined in accordance with the social value. Nor can we suspect on the above account the fundamental policy formulated by the Party for the people's communes to carry out the principle of equivalent value exchange.

On the contrary, such kind of temporary and partial measures are the preparatory steps for executing the long-term and extensive principle of equivalent value exchange in the not too distant future.

Only in this way will it be possible for the high-class goods in small number to establish a balance in their supply and demand relationship. And only in this way will it be possible for the State to centralize greater power to accelerate the accomplishments for socialistic construction and to produce more essential goods to satisfy the requirements of the broad masses. In our study of the equivalent value problem, we must correctly understand this point in order to clarify various kinds of confusing thoughts and to rectify all erroneous points of view.

## THE NATURE OF THE BAZAAR TRADE IN RURAL AREAS IN ITS PRESENT STAGE OF DEVELOPMENT

Following is the translation of an article by Wang Kuo-chang (王國章) in Kuang-ming Jih-pao, Peiping, 22 May 1961, page 4.

The well-planned and well-guided development of the bazaar trade in rural areas is an important policy in the consolidation and development of the people's communes in rural areas. The bazaar trade in rural areas is an integral part of the unified socialist market. It is an auxiliary to the socialist State-operated commerce. Right now bazaar trade is being revived and developed everywhere. One of the important problems is how to guide it and nourish its healthy development so that the goal of developing production and making the economy of rural areas prosperous will be realized. Toward this end, we must have a clear picture of the bazaar trade so that we may know how much freedom should be allowed in its operation.

What is the nature of the bazaar trade in rural areas in its present stage? I believe it is basically socialist. This conclusion is at least supported by the following considerations.

First, production determines circulation. To analyze the nature of the present bazaar trade, we must first understand the nature of the socialist system of our country and the condition and nature of ownership of production means by the people's communes in farm areas.

In the present stage of our country's socialism, public ownership of production means takes two forms; namely, socialist all-people ownership and collective ownership. The former is in a dominant position. The three-level ownership of production means in people's communes is centered around production brigades. Communes and production teams also share the ownership. Despite its greater scope and higher degree of public ownership compared with the advanced agricultural production cooperatives, the people's commune is still of a socialist nature. In rural areas where this kind of ownership system and socialist production relationship prevail, it is impossible for the bazaar trade to develop into something of a capitalist nature.

The goods exchanged in the village bazaar trade are mainly of the third category for which free trading is allowed. Goods of the first category such as foodstuffs, cotton, oil, etc., are banned from bazaar trade. Products of the second category which are sold to the State under contract are permitted to enter bazaar trade only after the contracts with

the State are fulfilled. The goods which are exchanged in bazaar trade are mainly collectively produced by various levels of the rural communes. Some of the goods are produced by the families of members as a side-line production. Provided that it does not interfere with the development of collective economy, side-line production of families of members is a necessary part of the socialist economy. It belongs to the economy of the socialist collective ownership system and the economy of the all-people ownership system. Its characteristics are determined by the economies of the all-people ownership system and the collective ownership system. Therefore, provided that the development of the collective economy is not affected, to permit and encourage individual members to till their own land, to raise livestock and poultry, and to manage family side-line production are conducive to promoting production, enlivening the village economy, and improving members' livelihood. This is the substance of the matter that deserves positive and appropriate evaluation.

We must also be aware that the main production means and labor force in farm areas are controlled by the various levels of the communes. Members can only utilize their free time, holidays, and auxiliary labor force to engage in side-line production on their limited land or other small pieces of land. Nevertheless, these side-line productions are privately managed and their products are also privately disposed of. Under such circumstances, it is possible for them to develop aberrations. In our work we must draw a line between the side-line production of member families and capitalist tendencies to understand more fully the nature of the bazaar trade and to determine measures of controlling it on the basis of these facts.

Second, to understand the nature of the bazaar trade in rural areas correctly, we must also analyze the relationship of the exchange in such trade.

In the bazaar trade of our country there are no capitalists or middlemen participating. Speculation is banned, and members are not allowed to abandon farming to go into business. Participants in such trade are mainly communes, production brigades, production teams, and members who have their own products, and individual consumers in nearby cities and towns. State business organizations in the bazaar area also take part. The economic relationships are (1) between State business organizations of all-people ownership system and all levels of communes of collective ownership system; (2) between all levels of the communes; (3) between the members; (4) between farm producers and individual consumers in nearby cities and towns.

Although the percentages of the total trade volume for each of the four kinds of participants vary from time to time, the first two kinds will have a larger share of the trade than the remaining two. One such example is the bazaar trade at Ts'ui-chia-ch'iao in Honan Province. From 1 December of last year to 20 March of this year, the first two kinds constituted 68% of the total volume of trade. This included trade between all-people ownership system and collective ownership system, between all economic units within the collective ownership system, and between all-people

ownership system and collective ownership system and individual members. In these relationships of exchange, there is no exploitation relationship and none will be allowed. The relationship is that of comrades helping each other. Trade volumes between members and between producers and individual consumers in nearby cities and towns are also relatively large. At the Ts'ui-chia-ch'iao bazaar trade in Honan Province, these constituted 32% of the total volume of trade for the period from 1 December last year to 20 March this year. In such trade, sellers are producers themselves and sellers and buyers do business directly. Hence, there is a basic difference between the relationship here and that in capitalist markets, in which merchants buy goods in order to sell to make exorbitant profits. The latter relationship is that of exploitation. In bazaar trade the exchange between members is to get certain products to meet their own needs. In present-day China, this type of relationship may be said to be within the realm of the collective ownership system, and is a relationship of mutual help and cooperation between producers.

The present bazaar trade relationship is also different from that between small goods producers under private ownership system. Small goods producers are private owners as well as laborers. It may be said that the exchange between them is void of exploitation relationship. But they are subject to the exploitation of the middlemen. The majority of small goods producers will become bankrupt according to the law of values and become proletarian. A small number of them will become middlemen, get rich, and become exploiters. This is the origin of capitalism. In present-day China, the essential production means in the farm areas are publicly owned, the labor force is collective, and products belong to the collective units and are distributed by them. Under such circumstances, there are no seeds of capitalism in the development of the bazaar trade, and hence no capitalism will develop.

Third, the nature of the bazaar trade in rural areas is to a large extent determined by the nature of the socialist commerce.

Unified socialist markets have long been established in China. The major constituent of the markets is the socialist State-operated business. The bazaar trade is a necessary auxiliary. Part of the goods exchanged in bazaar trade (industrial goods) are supplied by the State and part of the goods are purchased by the State. This means that a large portion of the exchange involves socialist State-operated commerce. More important, the socialist State-operated commerce is the guiding force in unified markets. The purposes of the participation of socialist State-operated business in bazaar trade are to provide better organization and leadership, and to carry out State trading policies so as to organize trade according to socialist principles.

It should be noted that bazaar trade is also different from socialist State-operated commerce. One of the important differences is price. The State-operated business cannot sell goods except at prices regulated by the State. Prices at the bazaar trade cannot be controlled by the State, because the products are varied and small. They can only be settled by the sellers and buyers. Hence, prices of goods in bazaar trade are influ-

enced by supply and demand. When the supply exceeds the demand, the price will fall. When the demand exceeds the supply, the price will rise.

When we talk about prices in bazaar trade, we must do a little deeper investigation and treat each case separately. There are three kinds of conditions that exist in price fluctuations in bazaar trade. The first condition is that certain prices are unreasonable to start with and their fluctuations should be judged as reasonable. Second, price fluctuations are results of relationships between supply and demand. When production has caught up or supply and demand have been readjusted, the equilibrium between production and consumption will prevail and prices will then return to their normal levels. This kind of condition is allowed in bazaar trade. The third kind of condition is price disturbance resulting from merchants' speculation. This condition must be controlled.

To sum up, I believe that the bazaar trade can only be developed as an auxiliary to the established socialist unified market. Middlemen and speculative merchants are all barred from the exchange between communes, production brigades, production teams, and members. The guiding force in bazaar trade is State-operated business. The relationship of exchange of goods is that of socialist mutual help and cooperation. In the light of these facts we say the nature of bazaar trade is socialist. But we must also be aware that the bazaar trade is in many respects different from the nature of socialist State-operated business. Because such trade is subject to the influence of supply and demand, fluctuations in the prices of certain goods may be so great that even certain banned goods may be brought into the trade, thus affecting State purchases and creating other ill-effects. Additionally, there is the minor economy of side-line production of members' families. This type of economy basically belongs to the economy of the socialist collective ownership system and the economy of the all-people ownership system, and is an auxiliary to them. But it is to a large extent influenced and regulated by the law of values in bazaar trade. In our analysis of bazaar trade, we must take into consideration all these possible adverse developments. Our over-all view is that the nature of the present bazaar trade in rural areas is basically socialist.

Two conclusions may be drawn from the above analysis. First, all operations in bazaar trade that are of a socialist nature should be greatly developed. Second, appropriate controls should be exercised to insure the healthy development of the bazaar trade. Past practices have proved that in areas where bazaar trade was conducted this way, production was up and the economy became lively. As a result, the people's communes in these areas have become healthier.

## IMPROVING ALKALIZED SOIL FOR RICE PLANTING

[Following is the translation of a news item by Chi Chang-shun (戚長順) in Kuang-ming Jih-pao, Peiping, 24 May 1961, page 2.]

The Forestry Industries Soil Research Institute of the Academia Sinica has been cooperating with local farms and the Water Conservancy Bureau of the Ex Kuo-erh-lo-sse Mongol Nationality Autonomous Hsien, through eight years of experimental research. They have succeeded in producing a high yield of 10,000 chin of rice on each hectare of soda-alkalized land.

The Kuo-chien Irrigation District Farm was established in 1950. At that time, because they were not able to fully understand the special characteristics of saline-alkalized soil and lacked irrigation experience, they did not have good harvests when they planted rice.

In 1953 the Institute accepted the task of "treating" the soil for alkalis. The scientific personnel started with meticulous research into the saline content of local soil and in the basic characteristics of the soil. They cooperated with the district water conservancy bureau and farms of the irrigation district in investigating water sources. They dug several scores of observation wells and made year-long surveys in changes in underground water movements and saline content.

They broke away from the old laws of "first improve and then utilize," and adopted the policy of simultaneous improvement and utilization. They used river water in irrigation, water expulsion in washing away the soda. They fertilized the area with stable manure and straw ash and planted water rice. They were able to reduce the saline content of the soil year by year and increased production of rice in the same manner.

On low production land, in which the concentrated alkalinity would not even permit grass to grow, in 1955 they were able to produce 927 chin of rice per hectare. In 1959 they were able to raise this figure to the high production rate of 10,000 chin. This was more than double the standard of production for good soil in that area. Last year the local hsien Party Committee held on-the-spot conferences and promoted large-scale rice planting and improvement of alkaline soil.

The main reason for their success in treating alkaline land lies in their insistence on the policy of scientific research for service to socialistic production and reconstruction. They insisted on long-term on-the-spot penetrating investigation, regardless of difficulties, not fearing failures, and keeping faith in their ability to understand nature and

reform it.

They spent two hard years in investigation and analytical work, and discovered that the main reason for their failure in rice production lies in the fact that underground water had a high sodium hydrocarbonate content. This chemical rises with the water in summer to the surface layers of the soil and poisons the rice, making its roots rot and making the stalk and leaves brown.

Later, through six years of work, they adopted the consolidated treatment method and concentrated their energy in attacking two bottlenecks. They were able to reduce the salt content of the soil, lower the underground water level, and prevent it from rising and bringing with it the salt content.

The consolidated measures were: (1) investigate the water sources and leading river water to the land for irrigation purposes; (2) establishing water expulsion systems to expel the surface water and reduce underground water levels; (3) leveling and cleaning up the land, continuous plot-planting in order to prevent spotty accumulation of salt content; (4) gradual year-by-year deep soil turning, and utilizing stable manure to neutralize the soil's alkaline content; (5) selection of alkali-resistant rice seeds in order to raise resistance; and (6) grasping the characteristics of various stages in the growth of rice and reasonable control of fixed quantity irrigation.

After several years of planting, the salt content in the working layers of soil on this saline alkaline land has dropped. Soil fertilizer content has been raised. In order to enlarge the acreage of rice planting, they did research into the means of saving water used for irrigation. In this they also achieved results.

The success of these tests pointed to a bright future for improved utilization of alkaline land in Manchuria. The more than a million hectares of alkaline land on the Sung-liao Plains will now have the opportunity of being improved for the planting of rice.

#### Little Gems of Knowledge

Soda-Salt Soil. The principal salt content of this type of soil is sodium bicarbonate. Therefore, it is called "soda-salt soil." The distribution of this kind of land is among the interior land districts. The physical characteristics of this soil are very bad. During the dry season the soil is as hard as a rock. During rainy weather the water cannot seep into it. no

If there is/air circulation and water seepage in the soil, its structure is usually close and tight. It is difficult for soil bacteria to grow and reproduce in it. The soil colloids are almost entirely saturated with sodium ions. This is injurious to plant life. In parts where sodium content is high, not even one blade of grass can grow. The masses call this kind of land "chien-pa-la." [alkaline scabs]. The main points of distribution of this kind of land in our country are the plain areas of the northeast, as well as Sinkiang, Chinghai, and Tibet.

#### IV. POLITICAL

##### MEETING OF THE IMMORTALS BRINGS ABOUT SELF-REALIZATION AND SELF-EDUCATION

Following is the translation of an article by Kuo Tse-chen (郭劍兌) Chief Secretary and member of the Presidium Central Executive Committee of the Chinese Farm Labor Democratic Party, in Kuang-ming Jih-pao, Peiping, 16 May 1961, page 2.

The Chinese Farm Labor Democratic Party, utilizing the "meeting of the immortals form," held the seventh session of its Second Plenary Meeting in July last year. After this, organizations at the various levels universally called for the same type of meeting in order to proceed with the self-education and self-reformation of its members and related masses.

Active participation has proved that this form of meeting is very effective in carrying out political ideological education of the members of the democratic parties and cliques.

The advantage of these "meetings of the immortals" lies in conscientiously carrying out the policy of "mild winds and fine rain" in the spirit of self-education. From the very beginning of the conference there is repeated emphasis of the policy that these meetings are positively for the purpose of carrying out "mild winds and fine rain" for the spirit of self-education.

Added to this was the fact that there were many facets to the conference style. There were small group discussions and heart-to-heart discussions between two's and three's. They listened, they looked, they thought, and they chatted. They created an atmosphere that was amply democratic and beneficial for the exposure, research, analysis, and solution of contradictions.

Although the problems were brought to light at the meetings, mainly political ideological problems, they adopted the free discussion method in order to thrash them out adequately. In their discussions they were able to look for facts and reason and direct their attention to the analysis of concrete problems in order to take care of all different opinions. They did not insist on unanimity of opinion but allowed the expression of all opinions.

The winds blew mildly and the rain was quite thorough. This allowed the participants to do away with any and all reservation gradually, reveal all their thoughts, and say what was in their hearts.

Some people, after careful analysis of concrete problems, naturally

and without being afraid or forced, were able to have a more fundamental understanding. They realized that regarding their world viewpoint the time is now "ripe" and they have attained real understanding in their ideology.

The adoption of the "mild winds and fine rain" policy does not mean that there were no winds nor rain. It does not mean that there was harmony without reservation. Nor does it mean that there was no struggle of the ideologies, no criticism, or self-criticism.

The "meeting of the immortals" begins from the hopes of unification, passes through criticism or struggle, and arrives at a new method based on a new principle of unification.

At the meeting there were accurate and inaccurate, over-all and partial points of view. Therefore, to carry out discussion there must be criticism and self-criticism as well as promotion of ideological struggle. Only in this way can they arrive at opinions that are acceptable to all, change inaccurate understanding, and establish correct understanding.

The criticism and self-criticism at the meeting is based on the principle of solid search for facts and using reason to convince others. This made it easier for people to accept. Many people were of the belief that these meetings had the format of "acquaintances chatting with each other, and comrades criticizing and helping each other." Although there was a struggle of ideology, tenseness was not present.

The meetings adopted the method of depending on the raising of your own problem, analyzing your own problem, and solving your own problem. The so-called "your own" refers to the unity of the participants. At the meeting, they brought up and analyzed problems jointly. The unity of the masses at the meeting used their brain power to proceed with free discussion. They utilized active socialistic aspects to overcome negative capitalistic aspects. They first revealed and then discussed. They were first democratic and then concentrated, and thus solved their problems jointly through summarization at the meetings.

This is the concrete usage of the route of the masses in self-education and self-reformation. The special characteristics of this mass nature of self-education lie in the awakening of everybody's self-awareness in proceeding with self-reformation.

Because the problems were raised jointly by everyone, they were beneficial to everyone. This produced, quite naturally, a self-awareness in the hope of solving these problems. The analysis and discussion were carried on jointly by everybody. People were "both the educated and the educator." This did away with certain negative and passive conditions and prodded everybody in searching for an answer through self-exertion of efforts. Everybody sees and everybody expresses his own ideas in mutual prodding and mutual supplementation. The results gradually become more accurate and achieved their purpose of mutual uplift.

The result of this sort of self-education allows deeper penetration in the solution of problems. The reaction of many people is that "these meetings of the immortals do not cause gobbling up of the food and do not cause indigestion."

These meetings depend not only upon self-education of the participating masses, but also require the unification of mutual education. The Farm Labor Democratic Party invited the Communist Party comrades to report at these meetings. Some also invited progressive workers and responsible leaders of related organs to report and organize field trips, visits, and entertainment. These were very effective. Many problems of a critical nature were solved in this way.

This proves that when we combine self-education with mutual education we make external reasoning pass through innate reasoning to become effective. We change mutual education through repeated thought and investigation, discussion, and digestion into self-education. This is favorable to the deepening of self-awareness and self-education.

The "meeting of the immortals" carries on the spirit of "mild winds and gentle rain" and that of self-education through accurate leadership and under the guidance of accurate policy.

During these meetings the Party gave us a great deal of support and consideration. Aside from helping us in understanding and utilizing this form of meeting, it gave us concrete assistance and strong support on all sides. The responsible comrades at the various levels of Party organization also gave us reports at these meetings. This was especially true of our glorious leader, Chairman Mao, and other Central Party leaders who received the participating delegates and gave them encouragement and penetrating education. This was a strong motivating force in assuring the smooth running of the meeting, a further strengthening of reformation, and in further positive service.

Active participation has proved that in order to handle these meetings properly it is necessary to strengthen the leadership organization and insist on accurate direction. We must not allow them to follow their own course, but should purposefully lead the members in grasping accurate direction and in raising their level of understanding in order to achieve the goal of self-education.

## GALBRAITH'S FALLACIOUS THEORY OF COUNTERVAILING POWER

Following is the translation of an article by Kao Hung-yeh (高洪傑) in Kuang-ming Jih-pao, Peiping, 12 June 1961, page 4.

Galbraith, the newly-appointed American ambassador to India, is a capitalist economist who was a professor at Harvard University and the editor of Fortune magazine, the organ of monopolistic capitalists. According to Time magazine, he is now one of Kennedy's advisors. His job is, in his own words, to polish speeches and other official statements issued by Kennedy. Galbraith has written several books. Among them, American Capitalism has received comparatively wider attention. Since its publication in 1952, this book has been reprinted many times and translated into French, German, Italian, Spanish, and Japanese. In this popular work of his, he tried to "doll up" monopolistic capitalism under the cloak of "economic theories." He himself has also travelled widely, trying to sell his fallacious theory. Therefore, he came into favor with the monopolists and his name began to be known. Now he has even obtained an ambassadorial position.

The theme of the book, American Capitalism, is the fallacious theory of "countervailing power," which is designed to praise monopolistic organizations. Monopolistic capitalism came into being during the final period of the 19th century and the beginning of the 20th century. But bourgeois economists led by Alfred Marshall have persistently denied the position of monopoly in the economy of capitalism. Up to now, many bourgeois economists are still inventing and distorting figures trying to cover up the reality of monopoly. During the 1920's another group of bourgeois economists timidly proposed theories of "monopolistic competition" and "imperfect competition." Their objective was to confuse the true meaning of monopoly and make monopolistic organizations look like unimportant phenomena.

Despite the efforts to confuse on the part of the bourgeois economists, facts of monopoly have been ever increasingly cropping up in capitalistic societies. Take the United States for example. Right after the First World War, companies with assets over a billion dollars totalled only six. In 1952 there were 66 such companies. They represented only one-hundredth of one per cent of the total of companies in the United States, but possessed 28.3% of their total assets. Actually they controlled over 75% of the total assets of all companies in the United States. Under such circumstances it is indeed very difficult to deny the controlling

position of the monopolistic organizations. Hence, a number of bourgeois economists changed their method of defense and admitted the existence of oligopoly, but tried to cover up the controlling power of capitalists in politics and extolled the good points of oligopoly.

This is precisely what Galbraith is doing. In American Capitalism he is compelled to admit..."a substantial proportion of all production was concentrated in the hands of a relatively small number of huge firms..." and that there are about 400 to 500 people in charge of companies producing between one-third and one-half of the total production in the United States.

What are the consequences of the concentration of economic power? In this connection Galbraith proposed his fallacious theory. He said that if there exists a "private power" in society, economic development will automatically give rise to a "countervailing power" to oppose and nullify the former power. For instance, food manufacturing is controlled by a small number of giant companies, which can raise prices at will in order to squeeze out maximum profits. Under such circumstances, Galbraith says the capitalist food retailers will automatically become concentrated, forming a retailers' oligopoly in order to increase their sales and profits by bringing down the prices. It is said that the food manufacturers' oligopoly and the retailers' oligopoly will clash with each other over their prices. The latter is said to be the power to countervail the former so that the food prices will not become excessively high.

Galbraith's idea is that the "countervailing power" works to protect the consumers and protect capitalism from the ill effects resulting from the concentration of private power. This sort of explanation is of course extremely absurd. First, under the conditions of the control of the monopolistic capital, competition will produce many sharp and fierce contradictions and friction to accelerate the destruction of capitalism. There is no such thing as restricting and nullifying the monopoly, let alone the protection of consumers. In the second place, a monopolistic organization, unlike what Galbraith said, not only controls its special field of production, but also controls all related fields. For example, the Ford clan not only controls the Ford Company but also the organization which sells Ford products. The monopolistic group that controls General Motors even controls the credit for buying their company's products.

From this we can see that the so-called "countervailing power" does not exist. Finally, facts have disproved Galbraith's contention. During 1952 to 1953, the prices of meats which the American food manufacturers paid the farmers dropped 30%. Since the cost dropped drastically, according to Galbraith, the retailers' countervailing power would cause a corresponding or similar fall in retail prices. But this did not happen. During the same period there were only minor fluctuations of retail meat prices. Consumers did not get any benefits of the protection of the so-called "countervailing power."

Recently, the devilish hand of monopolistic capitalists in American

business has even more unmistakably revealed itself. Manufacturers have been establishing their own wholesale organizations and retail networks. Big retailers have not only devoured weak competition, but also established their chain stores and become manufacturers themselves. For example, up to 1947, 80% of the big cotton mills marketed their own products without middlemen. The Great Atlantic and Pacific Tea Company, which Galbraith cited as an example, had only 400 stores in 1913. In 1955 it had 4,650 stores, an increase of about 11 times. In the period of 1934 to 1946, Safeway Food Company altogether bought 40 food-processing plants, such as meat canning plants, oil plants, and bakeries. On the basis of superficial facts, Galbraith, the bourgeois college professor, boldly and shamelessly worked out the above fallacious theory. Actually there is nothing unusual about it. Tactics of vulgar economics are always like this. Marx said, "The more the vulgar economy is in fact doing nothing more than translating common concepts into pedantic language, the simpler, more seemingly natural, and more utilized it becomes, and the farther away it is from the sharpness of all theories. The more it approaches the formation of capitalist production in some vague manner, the closer it is to the factors of common concepts; hence, the more it floats among its natural factors. This renders best service to argument." (The History of the Theory of Surplus Value, Volume 3, page 568, 1957 edition, published by San-lien Bookstore.) Galbraith's "countervailing power" is an excellent example of modern bourgeois economics.

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